

ABSTRACT

Title of Thesis: **Revitalizing East Baltimore Neighborhoods:
A Community Based K-8 Public School
Campus**

**Christopher Jon Pundzak
Master of Architecture, 2004**

Thesis Directed By: **Thomas L. Schumacher, FAAR, Professor**

Baltimore City schools are recording a consistent decline in test scores. More than half of the elementary and middle schools in Baltimore are scoring below the national average. New curriculums are incapable of dealing with the problem. The source of the cause must be addressed. Inner city schools can not exist in the state they're in. In order for a school to function well it requires the collaboration between not just students and educators but a community as well.

The solution to the blight of the Baltimore Public School System is the implementation of community structured schools. This thesis claims that the development of the successful education for our youth lies in the design of a school that promotes health, safety and community. The incorporation of community based services and secondary education in an open campus setting will ensure a watchful eye over the maturation of inner city youth. Strong bonds within the urban environment will produce success.

REVITALIZATION OF EAST BALTIMORE NEIGHBORHOODS:
A COMMUNITY BASED K-8 PUBLIC SCHOOL CAMPUS

By

Christopher Jon Pundzak

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Architecture
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Advisory Committee:
Professor Thomas L. Schumacher FAAR, Chair
Professor John M. Maudlin-Jeronimo FAIA
Professor Ralph Bennett AIA

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INTRODUCTION

The success of education is dependent upon the environment of the school. Primary and secondary education represents the beginning of education for our youth. Primary and secondary education sets the stage for things to come for our youth. It is important to create a place that facilitates an appreciation of the benefits from an education. Success can be achieved in our high schools if a positive influence is made in early in the life of a student. It is possible to change the image of the school. “’60s-style boxy egg-carton structures with rows of classrooms and long dark hallways that resemble prisons,” is a standard that has persisted too long.

Environment effects the student at many levels. Education begins and ends in the community. If the community is brought into the daily functions of the school then education becomes more effective. A successful community school doesn’t end with community based functions based in the school itself. A true community school has a visual connection to the rest of its environment. The attempt of this thesis is to design an urban educational facility, which relates the everyday use of the community school to the everyday existence of the neighboring community. The design is that of a typical day in the life of a child.

Baltimore is expanding and regenerating itself. Along the waterfront the pace of growth and of change is fast. New communities are being constructed like Pleasant View Gardens in historic Jonestown, and Broadway Estates in Washington Hill. These new housing developments require a school that can support growth and improvement.

Equally important to the success of connecting communities is the support of the education of potential students moving into the area. At the moment enrollment at City Springs Elementary School and Lombard Middle School are down. The effect of the poor testing history of both schools and fewer local students attending public school in East Baltimore is contributing to the low number of families moving to East Baltimore. This proposal will attempt to provide a new school for the community to bring families back to East Baltimore and create a precedent for more effective urban educational facilities. The area of East Baltimore is a prime site for new ideas.

At the center of East Baltimore one remaining low income housing project exists visually segregated from its changing neighboring community. Located adjacent to these apartments Lombard Middle School and City Springs Elementary School rest losing students. Despite efforts by City Springs Elementary to improve test scores enrollment is still falling and Lombard Middle School is currently at half its potential capacity. These two schools are situated at the center of five neighborhoods rich in diversity and culture and yet these schools are over ninety percent African American. It seems contradictory that education within the city should accommodate this fact. With the redesign of City Springs Elementary and Lombard Middle into a single K-8 grade community based school the region of East Baltimore will be able to regenerate itself into a successful diverse neighborhood.

SCHOOLS

Baltimore City Schools and Community:

There are many issues plaguing Baltimore City public schools that can be attributed to the decline in their performance.

A list of problems facing public schools:

- Of 171 schools [in Baltimore City], an average of 77% of kids live in poverty.
- Close to 30% of teachers in the 181 schools are uncertified. Only four school have no uncertified teachers and in nine schools 50% of teachers lack certification.
- Close to 40% of teachers have less than five years experience.
- The Baltimore school system is failing. Fewer than 30 % of 156 schools' third, fifth or eighth graders tested in reading or math performed at a satisfactory or higher level in MSPAP (Maryland School Performance Assessment Program) tests. In all 111 elementary schools more than 54% students tested performed unsatisfactory on the reading test, and in all 44 middle schools over 58 percent of students tested performed unsatisfactory on the reading¹

The issues are clear, education can not prove effective under these conditions.

It has become clear that school systems across the country have trouble

¹ Baltimore City Schools, A Failing System Riddled with Inequities, NCSC Public School Analysis Series. Fordham University, New York NY, National Center for Schools and Communities.

maintaining a consistent success rate among students. The goal of educators has been to create improved teaching methods in order to fix the problems facing the educational systems in this country. As administrators search for more effective teaching techniques a common thread has developed. This commonality is a overburdening of teachers. Qualified teachers are too few and the skills that kids require are the most common criticism by those educating our students is the lack of basic skills they possess. These basic skill deficiencies are the burden of successful classroom environments. The constant re-teaching required by teachers is a failure on the part of most progressive teaching methods. The approach to improving our schools and the abilities of our children begins with a reestablishment of responsible values in the family and the community. It is possible to optimize student abilities by way of a better-designed community. It is the prime objective of this thesis to explore the possibility of achieving a community design structured around the education of neighborhood youth in an attempt to improve the present educational pitfalls of our typical urban environments.

Urban Bonds

Urban communities have a great ability to form strong bonds. Bonds that Baltimore is known for. Richard Sennet's discussion of the changes in community pertaining to the ideas of Motion, Sight and Touch in his essay The Powers of the Eye can be used as guidelines for future urban planning. As Sennet outlines, it is the community's lack of informality, personal camaraderie, this is breaking up the bonds that once existed. The approach of this design conclusion will be an attempt to reestablish these bonds by combining elementary and secondary education into a unified program and designating it as a generator for a new community center and campus located in the heart of the newly redeveloped area of East Baltimore.

The site determined is prime for intervention. The growth of Baltimore has prompted a regeneration of many existing but dilapidated areas in the city. The new communities of Pleasant View Gardens, Lafayette Courts, and Broadview Estates are examples of this growth.



FIGURE 1: Pleasant View Gardens redesigned into new Flag House Courts development



FIGURE 2: Lafayette Courts rebuilt.

These new neighborhoods are improving the area of East Baltimore. A new Community school can be the link between many new and existing diverse communities. As these improvements progress, it is necessary that connections be made between them and present neighborhoods in order to prevent a segregation of specific communities. A community designed school is an approach to the future of East Baltimore that can facilitate these connections and unify these individual neighborhoods.

The diversity of the city is a phenomenon to be exploited and not ignored. As the area above Fells Point is in such a state of change there is prime opportunity to coordinate the efforts of individual developers and planners to incorporate a plan which will accomplish the goals outlined above. Implementing a community design centered on education in an urban context requires a development at the pedestrian scale. An integral part of this design is the manipulation of the street and its public and private domains. Jane Jacobs' 'The Death and Life of American Cities' subscribes to the notions of

Richard Sennett. The urban Street section provides the clues to a successful city environment.

Control is a major requirement of education. The successful arrangement of the school rests on the ability to establish controls within the daily use of the school. The boundaries of the school must be soft but distinguished. Pedestrian porosity within the school playing fields is a necessity for the ability of the community to make a positive impact on the students attending school. The development of commercial zones lining major avenues such as, Lombard and Pratt Streets running East and West and Central Avenue and Broadway running North and South, can help develop the perimeter boundaries of the new educational zone. The daily traffic and commercial activity of such streets can provide for soft limitations. A safe and watchful eye provides for a good environment for communities to thrive. The school can also sponsor much needed public open space within this community for the ease of pedestrian movement.

An adjoining urban square can provide an opportunity for the neighborhood school to become the pulse of the community. The school grounds can provide space for more than just education. The design of a multi-use and adaptable institution will further provide the communities involved a public common that will unify neighborhoods of the area and destigmatize education as undesirable.

Community Schools

A community school can take many forms but the theory behind a community school stays the same. The school ties education with the participation of local community organizations, business, and social services under one roof. The school building is an excellent resource and it is befitting communities to use this resource for more than just education. By incorporating other social functions with the everyday use of the school, the education of children becomes more integrated with the community and therefore their education becomes a neighborhood effort.

Plan Organization:

The design of a community school is based on the use of the school's community roles as well as the organization of the educational environment within. An important aspect of this design approach is to prevent the educational aspect of the program from mixing with the community programmed elements. The nature of the community school is the nurturing ability it affords the community with its students.



FIGURE 3: Public School 6, Staten Island, New York. Perspective of the courtyard run by Department of Parks and Recreation and used by students and public.

Public School 6, in Staten Island, New York effectively weaves the public spaces with the educational spaces in order to create a positive influence on the school. Many of the roles a community school plays occur in the evenings but in P.S. 6 the Gymnasium, Auditorium, and cafeteria are all clustered together in order to facilitate the types of encounters that enable a community school to much more than a provider of convenient facilities.

With-in the landscaped courtyard playground there is 24-hour access and is run by the Department of Parks and Recreation. There are plans to develop more land to

extend the public park system around the school but through the design of the school's massing and façade there maintains a strong connection to the surrounding architecture.

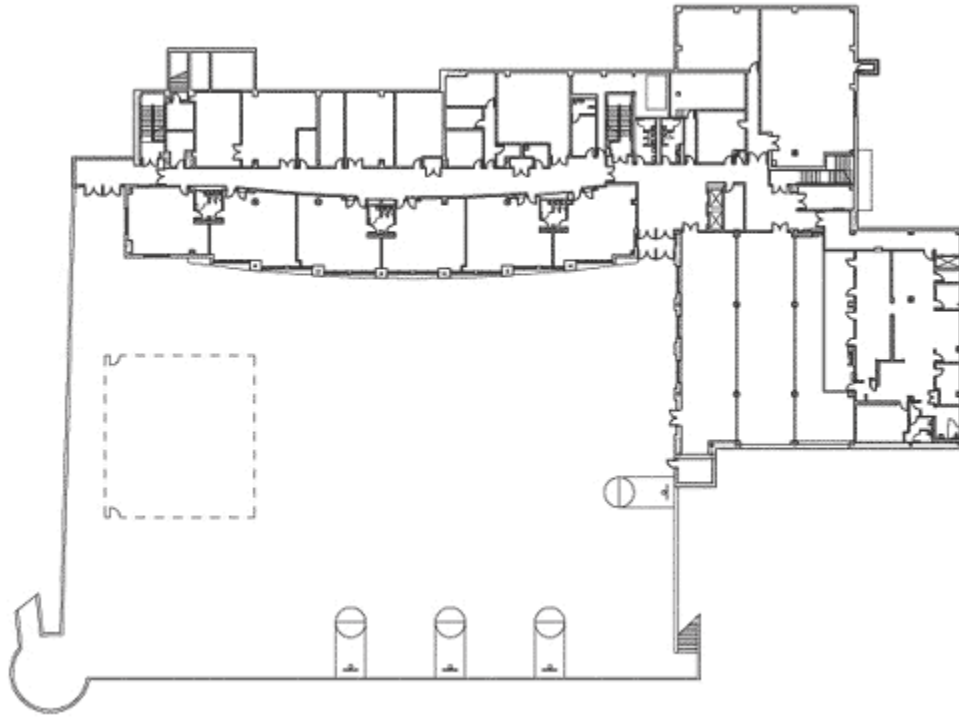


IMAGE 4: Plan of P.S.6 showing courtyard relationship with the school plan, and gymnasium and cafeteria located side by side and adjacent entrance to open space. Square Footage:110.000

Community schools are play dual roles in activating the success of education and bringing a community together, in urban environments in particular.

Public School 156 in Brooklyn, New York did exactly that. The once dilapidated area of southwestern Brooklyn called Brownsville was saved by the construction of a new community school. The rough neighborhood , neglected and failing, instituted a new school that took up a city block and served as a school and community resource center. Social events, sporting events, local performances, and educational events took place in the same location that an asbestos and lead infested old school building once stood. The result was an 1100 capacity K-6 school that illuminated at night through a large two-story

glass wall marking the entrance and implicit invitation to its halls. The school was built out of durable materials, future wireless capabilities and standard cluster room configuration allowing flexibility in teaching



FIGURE 5: Ground and second floor plans of the Public School 156 in Brooklyn, New York. The shape of the plan allows the building to maintain the street edge while creating a courtyard with-in. The entrance is a public space and is illuminated during the night to express a sense of inviting and community. Square footage 157.000



FIGURE 6: A computer generated model of School 156 shows in detail the public and civic gesture and urban context and its role in the design of the building.

As a precedent for interior design the Orchard Gardens K-8 Pilot School is an example of flexibility through innovation. The 750-student community school is designed so that within the building smaller groups of students are created. The students can be arranged by the changing layout of the building in three separate ways.

The school is three stories tall and has a “U” shaped plan. This plan is broken up into three general teaching areas with their own means of vertical circulation. “Up-and-down [the school’s] three major stairways forms “strand” small schools of 250 students from all grades; horizontally into three “mini schools” grouped by age: or by academies sorted by interest groups (arts, sciences, ESL).”

In addition, the community voted to design the school to make a clear statement from the exterior that this was a new school and demanded typical Boston brick school warehouse.

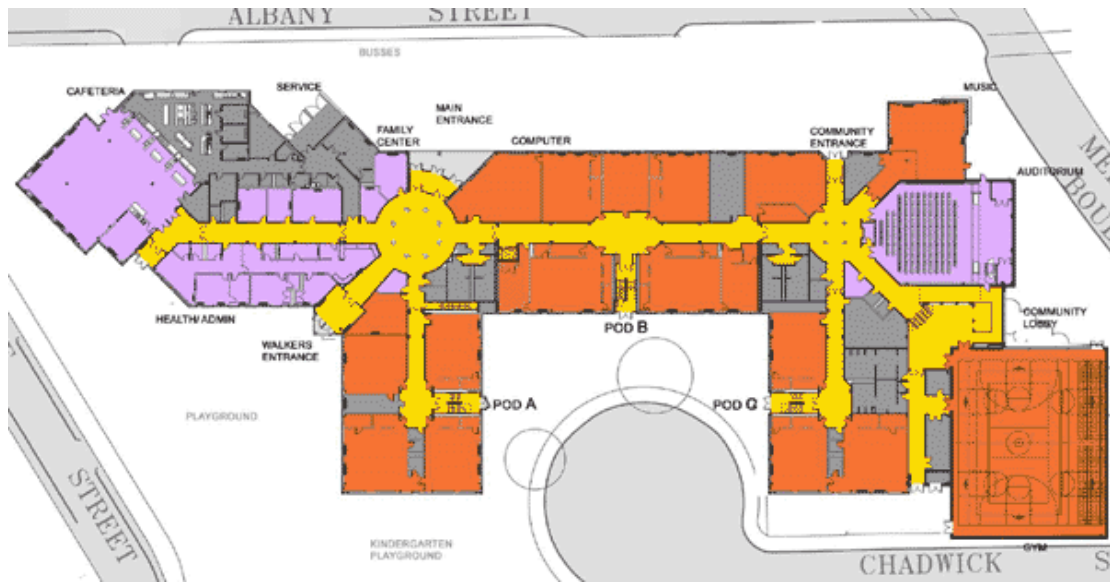


FIGURE 7: ground floor plan for Orchard Gardens K-8 Pilot School, Square Footage 144,000.

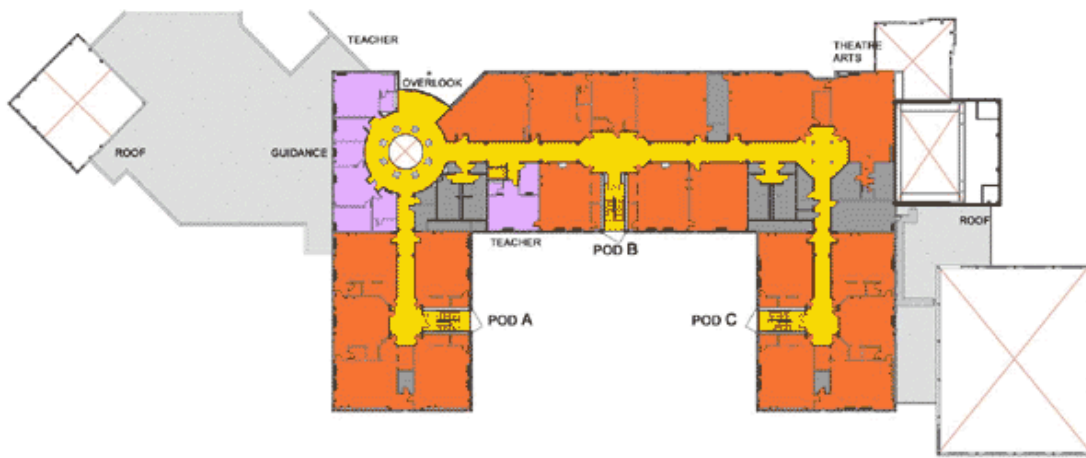


FIGURE 8: Second floor plan isolating three part plan and vertical circulation nodes
Program:

PROGRAM

PROGRAM	SQ. FEET PER SPACE	TOTAL SQ. FEET
---------	-----------------------	-------------------

COMMUNITY PROGRAM

Day Care Center

A child day care program for 60 children

Ex. Head Start Program

Reception	200	
(2)Office	100	
Common Area	1000	
Storage	300	1700

Day-Night Care Center (for children)

Reception	200	
(2)Office	100	
(2)Examination	80	
Storage	300	860

Health Care Clinic (for walk-in patients)

Reception	200	
(2)Office	100	
(2)Examination	100	
Storage	300	860

Department of Social Services

Case finding and evaluation, counseling,
information and referral, applications for
financial assistance, certification for food
stamp, program, etc.

(4)Office	100	400
-----------	-----	-----

Mayor's City Hall Office

Administrative assistance and coordination
of all other service programs

Office	100	100
--------	-----	-----

Department of Manpower Resources

Employment counseling and placement

(4)Office	100	400
-----------	-----	-----

Department of Juvenile Services

Provides counseling, problems of juvenile
offices, etc.

Reception	200	
(2)Office	100	
(2)Council	100	600
Office of Model Cities Agency		
Provides a variety of services to citizens related to health, housing, and recreation.		
(4)Office	100	
Work Area	300	
Storage	200	900
Youth Service Program		
Offers preventive counseling services and youth organized Programs ex. Boys and Girls Club of America.		
(3)Office	100	
(2)Interview Room	100	
File Room	300	800
		<u>6620</u>

COMMUNITY RECREATION

Performing Arts		
Auditorium	5000	
(2)Stage Rooms	200	
Lobby	1000	6200
Library		
	8000	8000
Physical Education		
Gymnasium	14000	
(2)Auxillary Physical Education	3500	
(2)Locker Rooms	1500	24000
		<u>38200</u>

EDUCATION

Core Academics Rooms		
(36)Classrooms	900	
(6)Lab Rooms	1200	39600
Special Education		
(3)Classrooms	1300	
(3)Office	100	
(3)Storage	150	4650
Media Center		
Library/Stacks/Reading Room	4500	
(3)Workroom	400	
Computer Station	300	
Office	250	
Storage	200	6450
Visual and Industrial Arts		
(2)Classrooms	1400	
Storage Room	300	3100
Administration		
Principal's Office	200	
(2)Counseling	100	
(4)Secretarial	100	
File Storage	50	
Supply Storage	200	
Office	120	
Conference Room	300	
Reception	200	
Community Education Office	450	1920
		<u>55720</u>

SERVICES

Dinning and Food Service		
Cafeteria		4400
Kitchen		
Receiving	200	
Storage	300	
Non Food Storage	300	
Locker Rooms	200	
(2)Office	100	
Food Preparation	2000	3100
Custodial Service/ Auxiliary Space		
(10)Closets	80	
Custodial Office	300	
Shipping and Receiving	200	
Storage	500	
(8)Restrooms	300	1380
		<u>8880</u>
Mechanical/Electrical – 8%	9000	
Circulation and Structure – 30%	36000	
<u>TOTAL</u>		<u>155000</u>

SITE CONDITIONS

Baltimore, Maryland



The City

Baltimore was first plotted in 1729. Baltimore's growth was slow and undisciplined until the establishment of a public water supply. The City then grew hastily along the path of the water source. This growth was organized further when a plan developed in 1818 by Thomas H Poppleton set a collection of intersecting grids responding to the waterfront.²



FIGURE 9: Thomas H. Poppleton Plan of Baltimore 1823

Baltimore's image is founded in the establishment of the urban rowhouse. The rowhouses of Baltimore helped establish the nature of the city's strength in community.

² Hayward, Belfoure, *The Baltimore Rowhouse*, Princeton Architectural Press, New York

Baltimore was a pedestrian friendly city. This fact created a solid foundation for a town of neighborly living.



FIGURE 10: East and West Broadway 2004

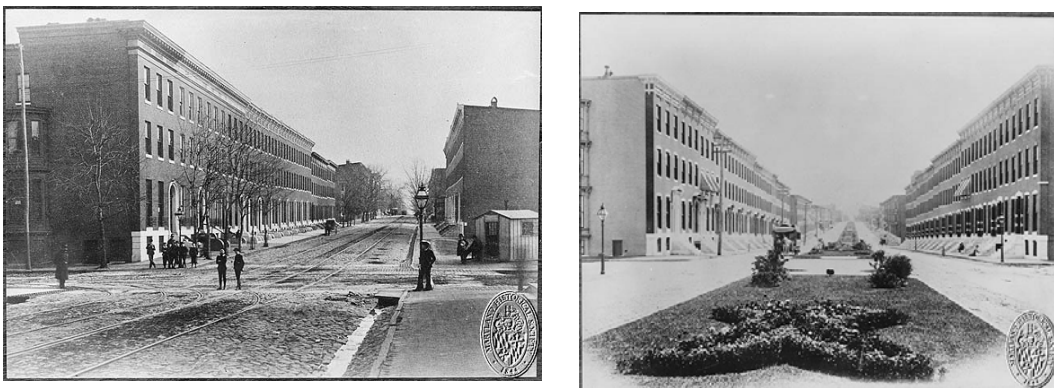


FIGURE 11: Linden Avenue at McMechen looking South and Fulton Avenue 1900

The Neighborhoods



FIGURE 12: Site Location at regional scale

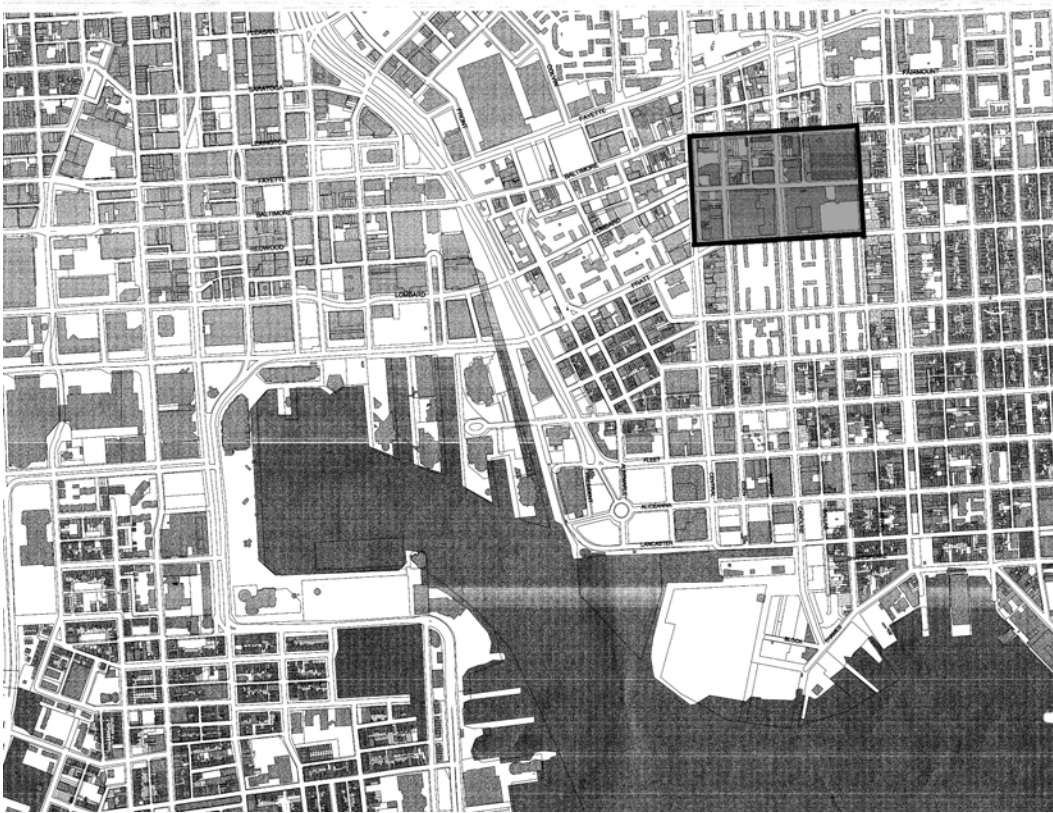


FIGURE 13: Site location at neighborhood scale

Southeast Baltimore has over the past fifteen years grown at an excellerated rate. The majority of the construction has been new. The waterfront areas of Fells Point and Canton have become a hotbed of growth for commercial, retail and recreational use. As a result of the waterfront's rapid expansion improvements to the failing businesses and residential fabric of Southeast has been trailing behind.

Located between two of Baltimore's primary downtown avenues, Pratt and Lombard Streets, City Springs Elementary and Lombard Middle School serve as the primary public institutions for the surrounding Southeast area

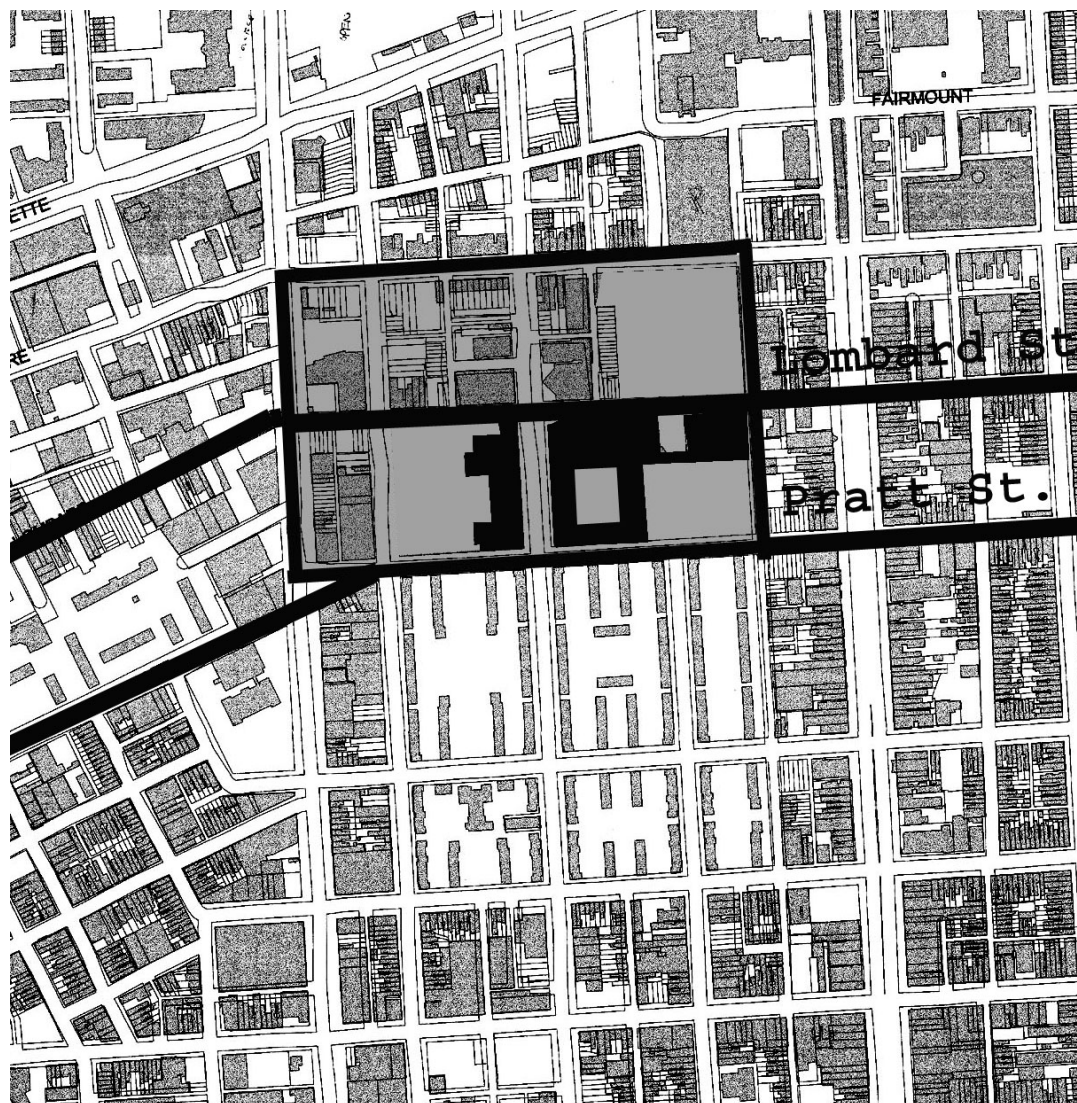


FIGURE 14: Lombard Street and Pratt Street with City Springs Elementary and Lombard Middle Schools in figure ground.

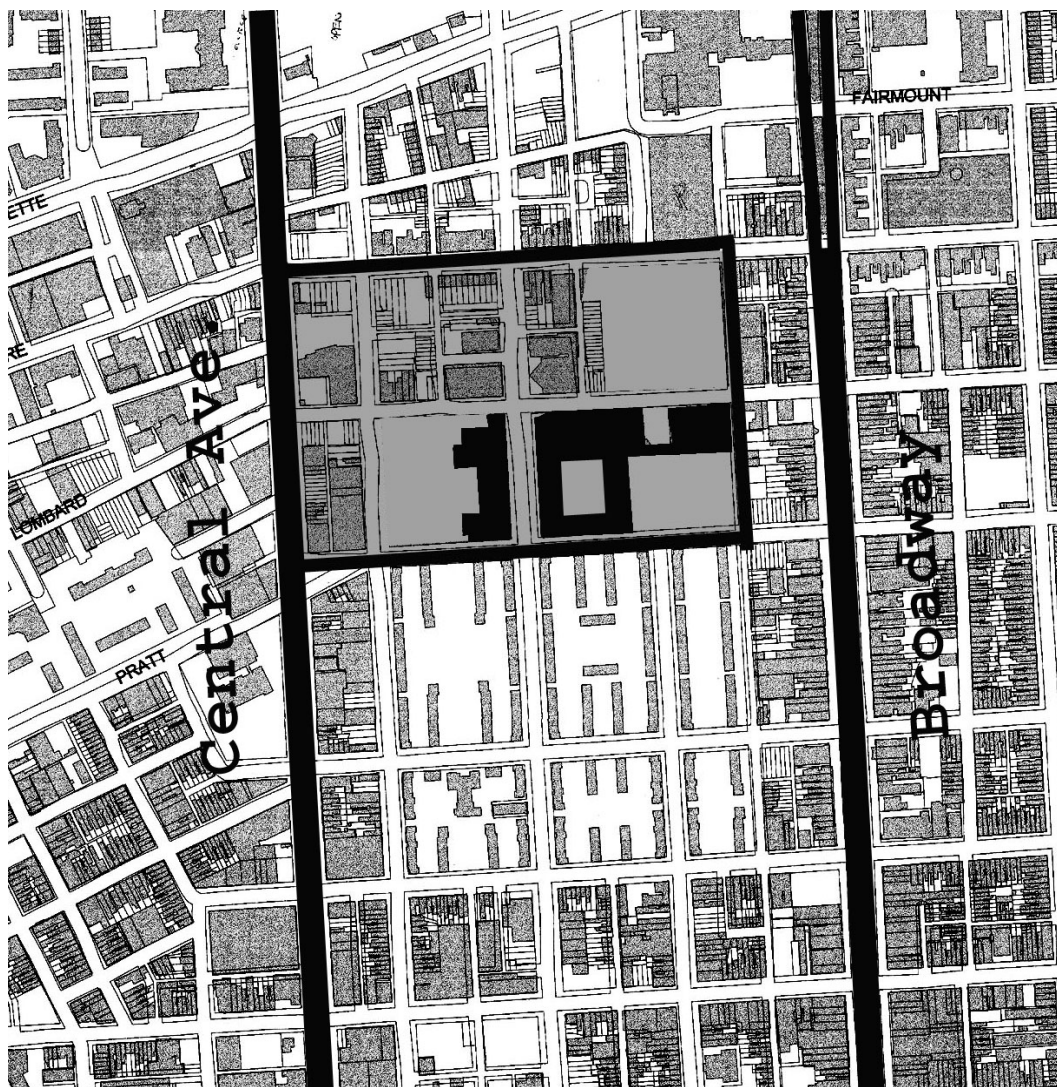


FIGURE 15: Central Avenue and Broadway

One of the last remaining public housing ventures from the garden apartment era, Perkins Homes, as a result lies unchanged. Perkins Homes is a low density, low rise, low income housing community that remains do to the rowhouse scale it maintains. This makes Perkins Homes unique and as a result salvageable. Having learned from the past, it is better to foresee this area as a potential renovation opportunity rather than a potential demolition.

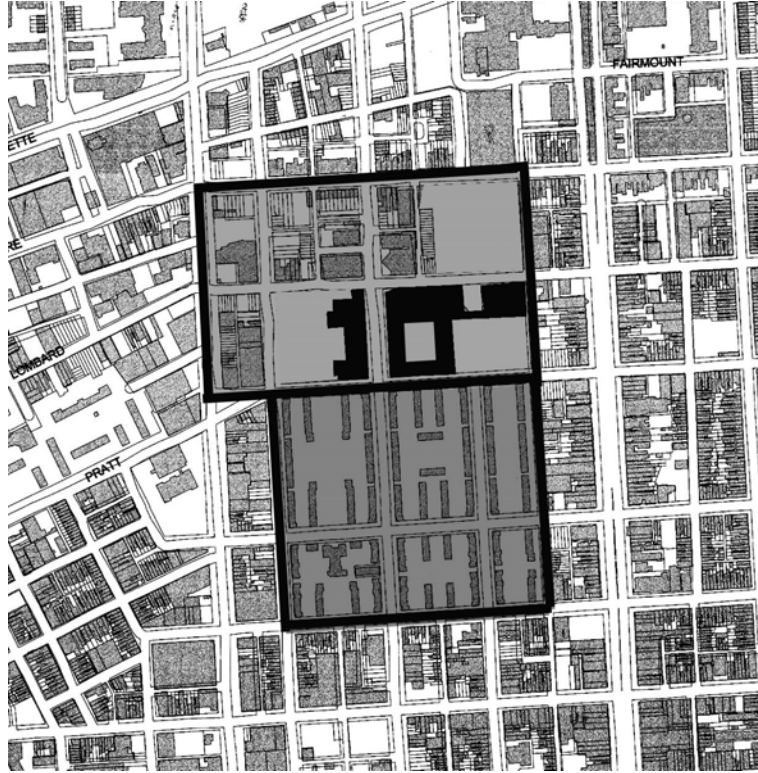


IMAGE 16: Perkins Homes and site determined. Perkins Homes takes up four large blocks between Eden and Bethel Streets from East to West and Pratt and Gough Streets North and South respectively.



IMAGE 17: Perkins Homes, looking down Bank Street East towards Patterson Park.

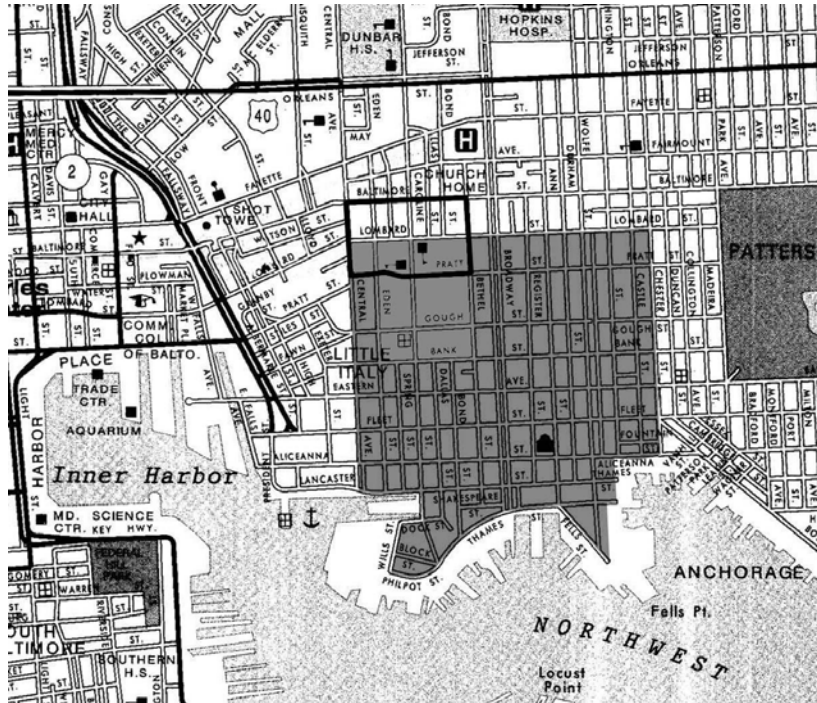


FIGURE 18: Fells Point neighborhood boundaries

Fells Point has been a major commercial district in Baltimore since its inception. The area that once was a bustling industrial and commercial enterprise now lays claim to one of Baltimore's premiere entertainment spots. Retail, restaurants and clubs abound in Fells Point along with remaining, H+S Bakery which has called Fells Point home since 1943. Fells Point is made up of primarily two to three story townhouses that were built in the late 18th to early 19th centuries. Most of the houses are still intact with original brickwork. Fells Point is also home to many one and two story industrial businesses that are currently, as a result of heavy development, being pushed out. The waterfront is constantly growing and the last twenty years in particular Fells Point has seen considerable growth. The growth that this area has seen has done nothing but improved the existing strength of the community found in Fells Point.

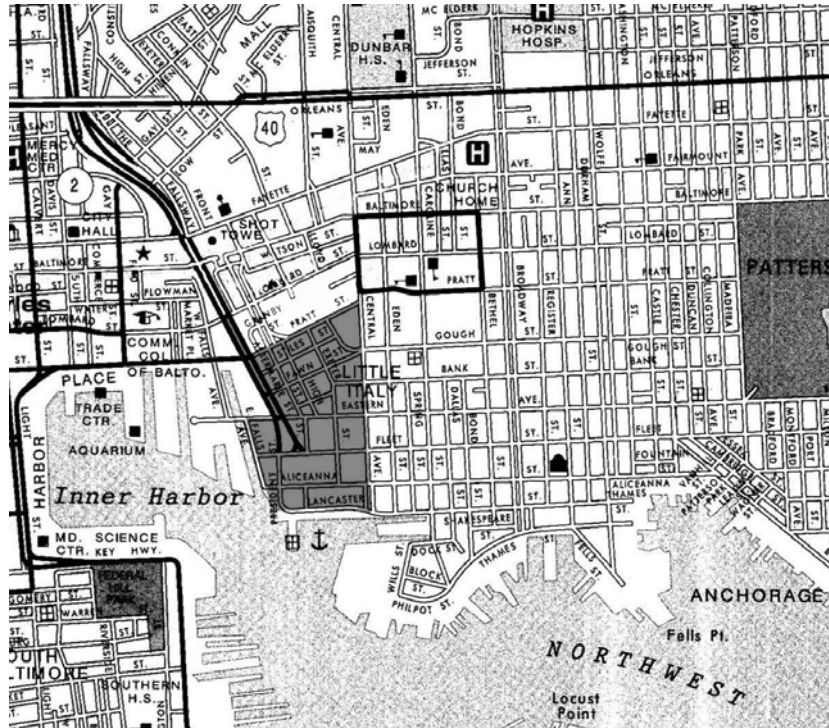


IMAGE19: Little Italy neighborhood boundaries

Little Italy is sandwiched between major development in Southeast Baltimore. The Neighborhood is a small district with a very tight primarily Italian community. The area is consumed by some of the best dining in the city and its charm and warmth is felt throughout. Little has changed in Little Italy since its growth from historic Fells Point. St Leo's Church which made it through the great fire of 1904 is a proud landmark. The brick and formstone facades that front the Baltimore townhouses and narrow streets bring a residential community into the reach of many visitors who reap the benefits of its late night outdoor community film festivals and continuous Bocci tournaments which last through the winters.

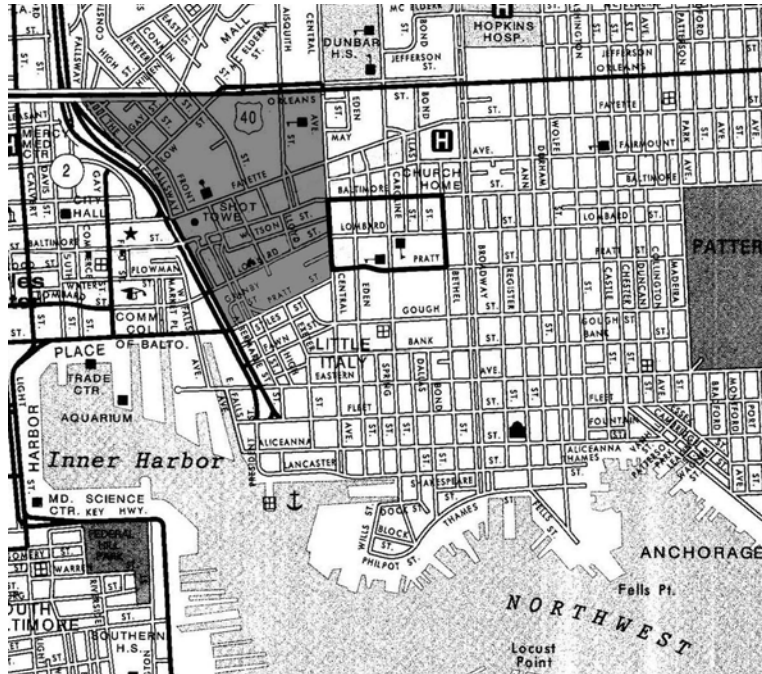


IMAGE 20: Historic Jonestown neighborhood boundaries

Jonestown was one of the original towns, including Fells Point and Baltimore Town, in the harbor to become part of what is now Baltimore City. Jonestown was named after the first mill established on the Jones Falls nearby in the late 17th century. Now Historic Jonestown is home to the new African American History Museum as well as the historic Flag House and Shot Tower. Jonestown was home to the Low Income Housing Flag House Apartments and a part of the disappointing efforts to improve past living conditions. In the mid to late nineties these and other low income housing high-rise apartments were torn down to make way for new communities. In place of Flag House Apartments is the current construction of Pleasant view gardens, a community of brick townhouses attempting to bring back what Jonestown once was, a neighborhood characteristic of the Baltimore rowhouse community.

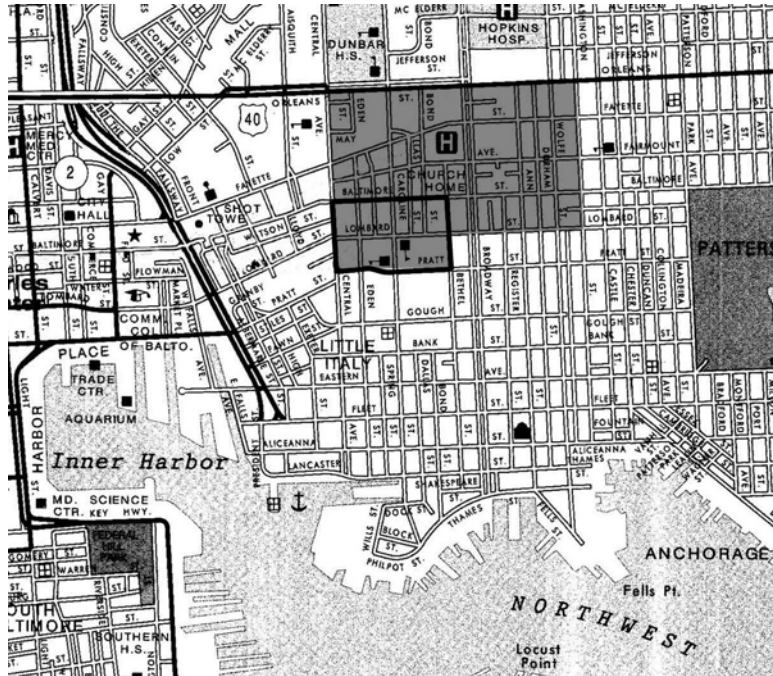


IMAGE 21: Washington Hill neighborhood boundaries

Washington Hill is primarily residential and is composed of many rowhouse styles. Victorian, Italianate, Queen Anne, Second Empire and Federal style Architecture are all present in Washington Hill. In addition to the existing rowhouse community, the new development of Broadway Overlook composed of mixed housing stretches from Caroline St. to the West to Broadway to the East. Included in the new development are townhouses of multiple size and apartment houses. This new construction mirrors the success of new communities like Pleasant View Gardens and is the kind of development which can fuel a resurgence of pride in community.

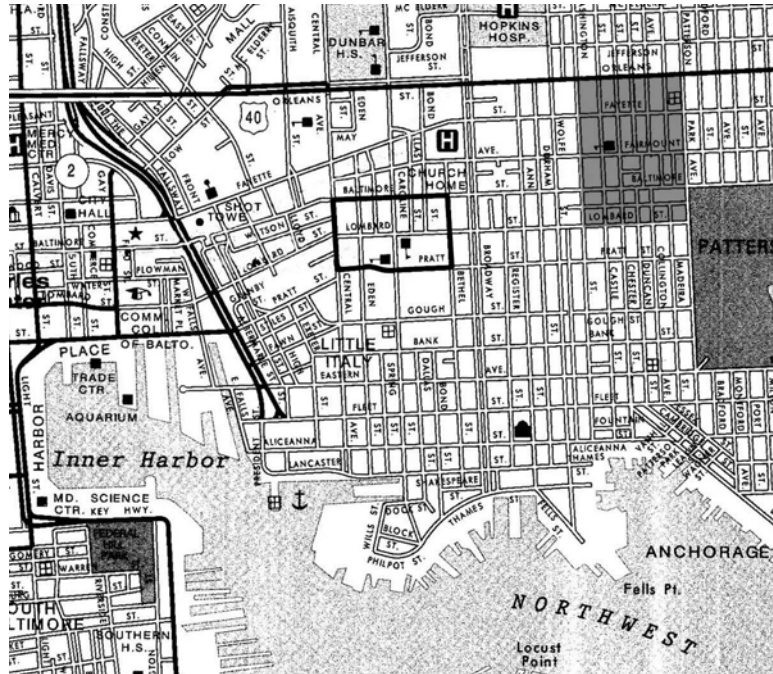


IMAGE 22: Butcher's Hill neighborhood boundaries

Butcher's Hill is a small community that borders Patterson Park and steep in neighborhood diversity. The area is made up of African American, Hispanic, Asian and white families. The cultural diversity of the community is echoed in house style, age of occupants and of taste in music and dinning. This small neighborhood has been recent recipient of an influx of new restaurants and bars that attract more than just the local residents. With an elegant view of downtown Baltimore Butcher's Hill is fast becoming an enjoyable spot away from the speed and density of Fells Point.

The Site



FIGURE 23: Diagram of residential density.



FIGURE 24: Diagram of retail zones



FIGURE 25: Diagram of industrial zones

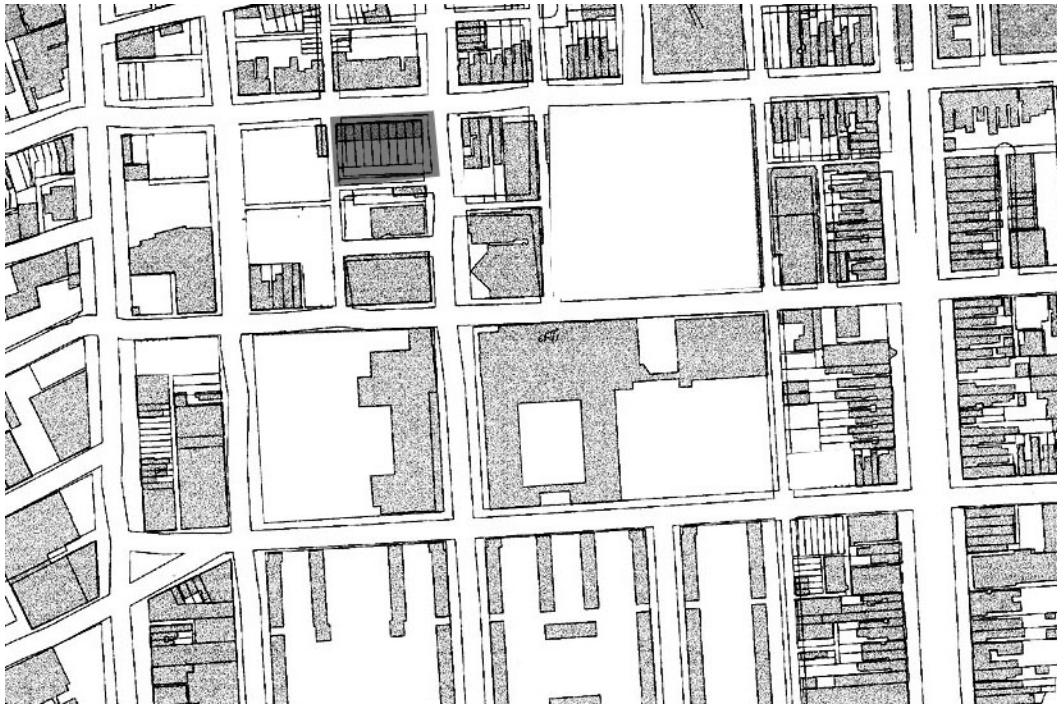


FIGURE 26: Diagram of only new development on isolated site.



FIGURE 27: Major vehicular streets



FIGURE 28: Figure Ground



FIGURE 29: Figure Ground Reversal

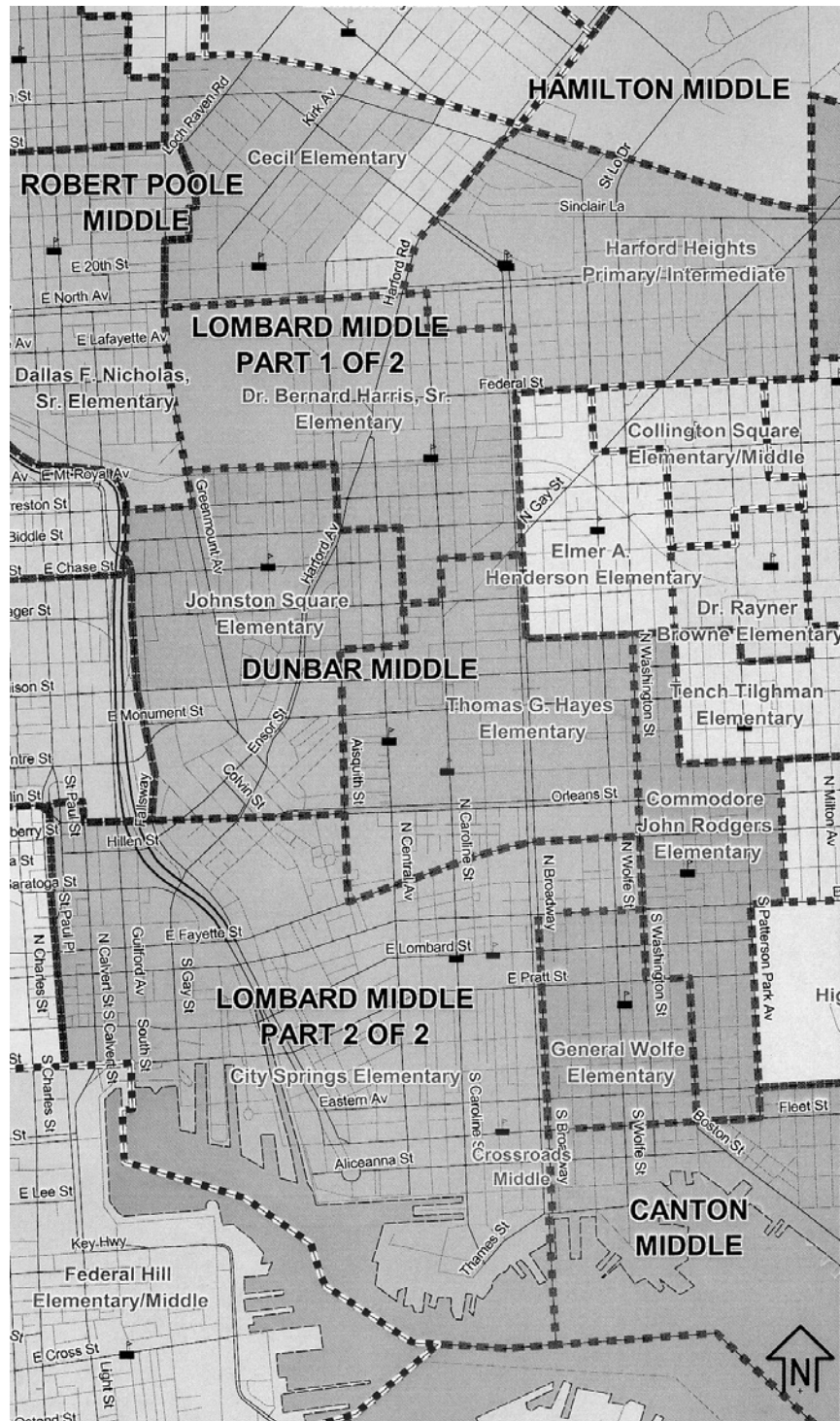


FIGURE 30: Existing feeding zones for local public schools.



FIGURE 32: City Springs Elementary School front entrance along Caroline Street.



FIGURE 33: City Springs Elementary School recreation field. The vacant lot is not maintained and the landscaping is negligible and the amount of impermeable surface creates a dank existence and visually inappropriate for an educational environment.



FIGURE 34: View looking south along Caroline Street. The width of Caroline Street has the potential to provide ample space for landscaping and pedestrian friendly connections.



FIGURE 35: Lombard Middle School front entrance with gravel faculty parking across the street in the vacant park.



FIGURE 36: View looking through the tree lined vacant park adjacent to Lombard Middle School.



FIGURE 37: View of Lombard Middle School recreational grounds, used as overflow faculty parking.



FIGURE 38: Lombard Middle School alley adjacent to Head Start Child Care Program building



FIGURE 39: View Looking West on Lombard Street towards downtown Baltimore.



FIGURE 40: View looking west on Pratt Street towards Baltimore with partial view of Perkins Homes.



FIGURE 41: View of Perkins Homes along Pratt Street. The orientation of the rows of apartment buildings set up a clear potential between the campus site and the residential activity of the low-income housing.



FIGURE 42: Typical Perkins Homes sectional view. Little vegetation and sterile nature for community right of way



FIGURE 43: Typical frontage to enclosed courtyard within Perkins Homes.



FIGURE 44: new construction of Pleasant View Gardens, replacing previous low-income high-rise apartment buildings.



FIGURE 45: View looking south on Central Avenue towards the harbor, showing similar intervention potential to that of Caroline Street.



FIGURE 46: View of East Broadway and Lombard Street.



FIGURE 47: View of West Broadway and Lombard Street

CAMPUS PLANNING

“It is normally necessary to express the academic character of different institutions in built form and spatial pattern. Reinforcing the high ideals of learning through the physical fabric gives architects the opportunity to experiment or innovate.”
Foot p.2

Successful schools are the result of good environment. The environment of an urban school has the potential to tap into a diverse melting pot of cultures and experiences to inspire and enhance the effectiveness of education. The problems with inner city schools are that the educational institution acts as deterrent and not a place. The philosophy of involving community organizations and residents in the education of our youth can be achieved, not only by providing the amenities of a community school but also through the advantages of a designed urban campus plan that encourages its use. A campus plan will create vitality to the stale and underdeveloped site that exists in Baltimore today.

Educational facilities can be more effective. Inner city schools can benefit from a design that incorporates the buildings with its unique environment. Primary and secondary education is the starting block for higher education and if the experience of being educated in a similar environment can be designed into the program then a connection could bridge the barrier young people today feel is holding them back.

Campus design is not for universities alone. If public school systems embraced further the philosophy of the community school then the opportunity to for the partnerships with local businesses and social services and neighborhood clubs that exist can grow further and the development of a campus for children from all ages could

greatly influence the perception that all the possibilities and opportunities that await them are in fact reachable.

The design of the educational campus relies on two important factors to be successful, the flexibility to grow and change with time, and a clarity in function and support of the ability to educate young people. “ The challenge of the [school] masterplan is to create an academic community and a learning environment which survives over time” foot p.14

The plan of a campus of any size can take many forms. This thesis will attempt to apply the benefits of three characteristic forms of campus planning as they apply to an urban condition. The Gridded plan, the Molecular plan, and the radial plan each have one consistent thread, the ability to adapt to the future needs of a campus. It is always necessary to design the ability to change as masterplans often fade, a good plan will take into account the nature of urban environments, and that is constant growth.

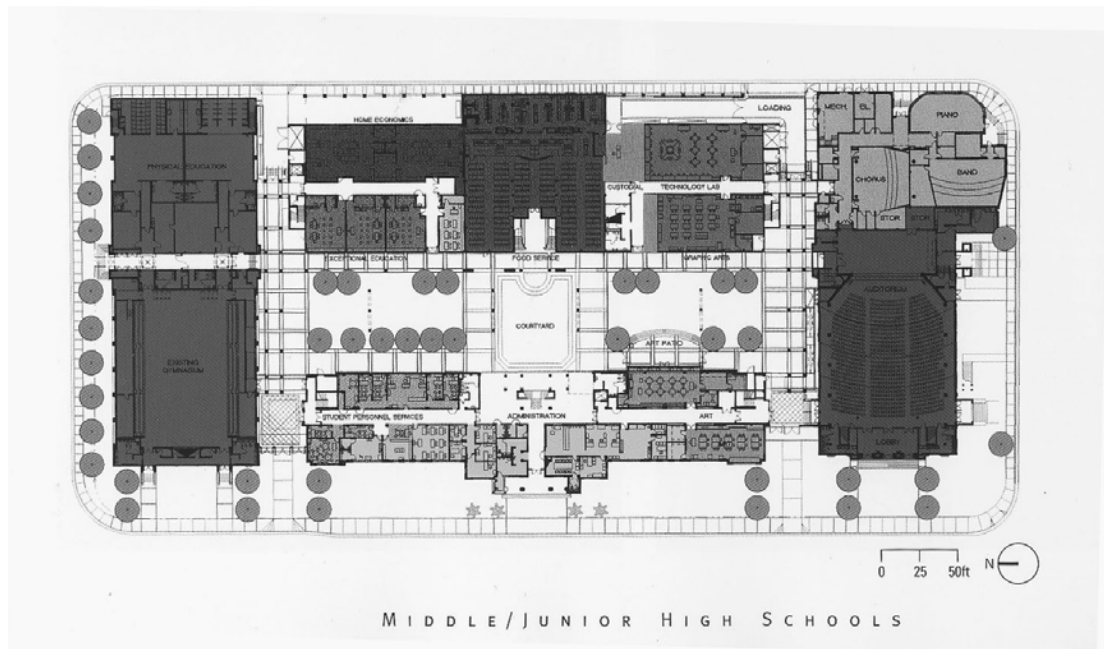


FIGURE 48: Miami Edison Middle School, Miami Florida, R.J.Heisenbottle Architects, PA. Students – 1475, 14.5 acres. An example of a enclosed gridded plan type. This school relies on the rigor of the grid to make place within the group of buildings, a particularly American style lawn inspired by the cloister parti.

Grid-Dominated Plan

As with any gridded system of organization, a plan is based on rational lines of association. Paths, buildings, streets, and landscaped elements are developed according to hierarchy of linear arrangements. Two strong benefits to the gridded system are the precocity afforded and the ability of rational growth. College campuses like IIT(Illinois Institute of Technology) and California Sate University in Sacramento are good examples of this organizing principal. Foot p.10 But none more influential than the plan of the University of Virginia. UVA is also a formal gridiron design with a linear green reminiscent of a village green and certainly serving an equal purpose.

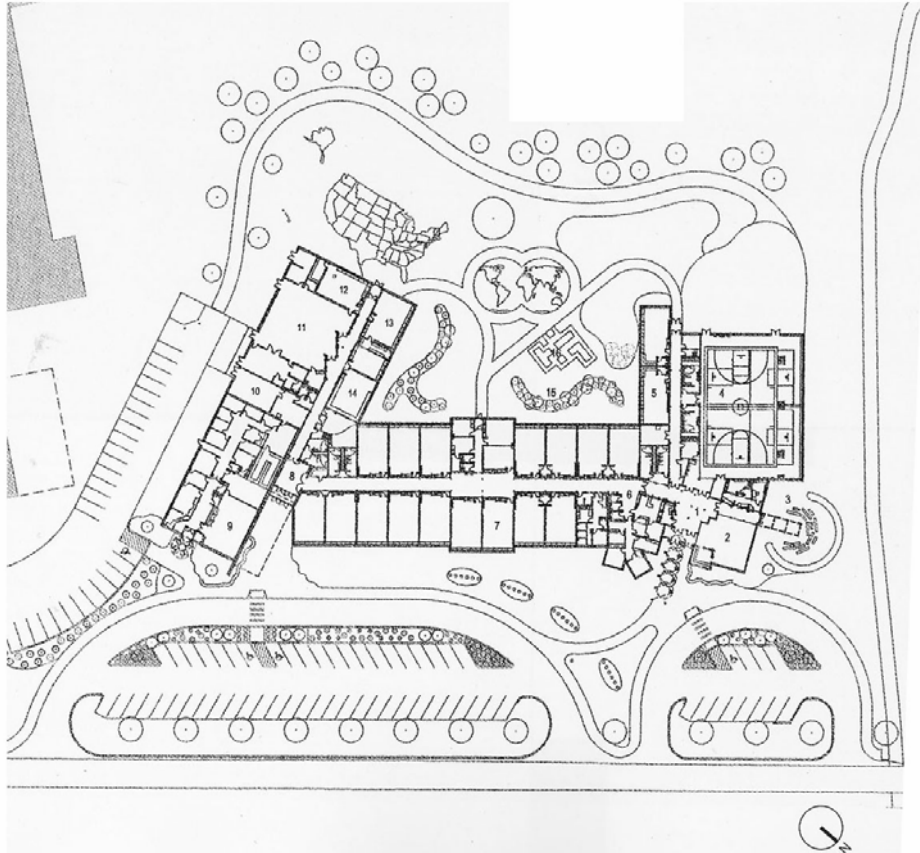


FIGURE 49: Wycallis Elementary School, Dallas Pennsylvania, Quad Three Group Inc. 500 students, 5.75 acre site. The form of the building responds to the functional nature of each component. The parts of the whole are unique in massing and form but relate to each other by their usage.

Molecular Plans

A contrast to the gridded plan, molecular organization does not rely on linear relationships but rather functional ones. The principal design approach is a process of “self-referenced spatial patterns to shape development.” This means that the campus is ordered about a functional logic that applies to further development as well. The molecular type leads easily to the third organizing principle of radial planning. The enclosed space in a molecular plan tends to be dominated by building as opposed to the environment and lends itself to solving the constraints of the city.

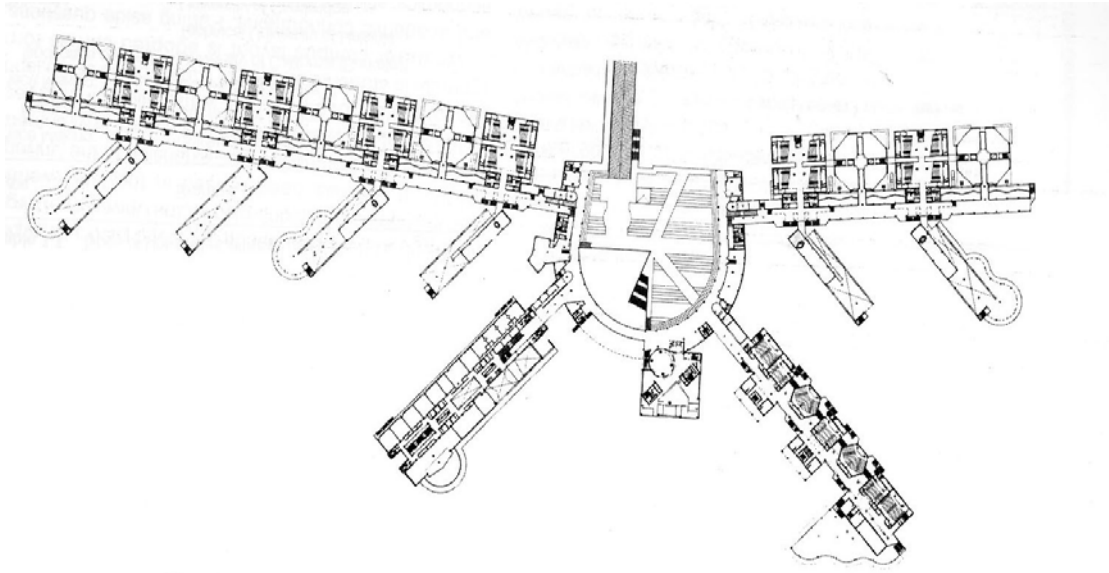


FIGURE 50: Temasek Polytechnic, Singapore. Micheal Wilford and Partners. The radial plan in this campus design focuses on a communal space at the center. Whether the centrality of this plan type is focused on a particular building or space the principal forces behind it generation are the flexibility of the almost limitless growth potential and its connection to the surrounding environment.

Radial Plan

The radial plan provides a clear center arbitrary or not. This approach increases spatial awareness as well. The advantages of a gridded plan, ease of growth and clarity of organization can be obtained in the radial plan as well. This plan also provides a connection to the environment it resides. There are always two primary directions, a focus with-in and one outward. This is an opportunity to focus on the connections between campus and the surrounding urban landscape.

SITE INTERVENTIONS

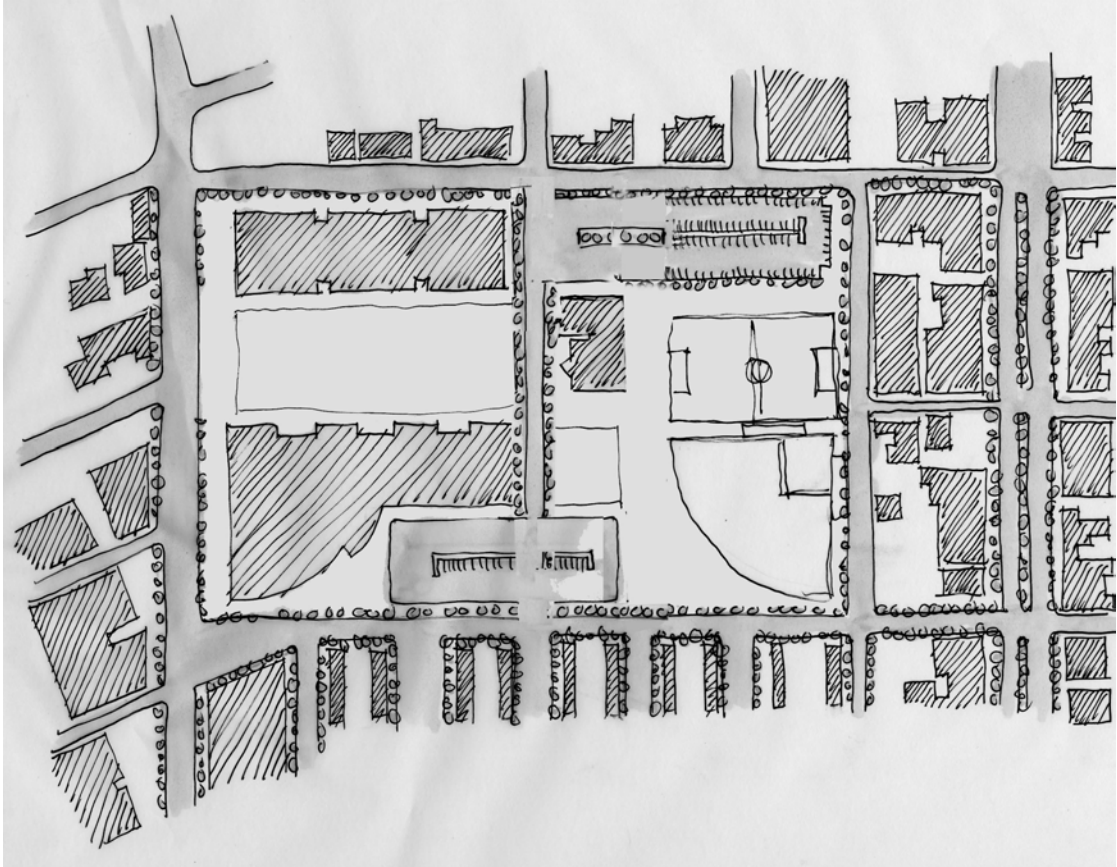
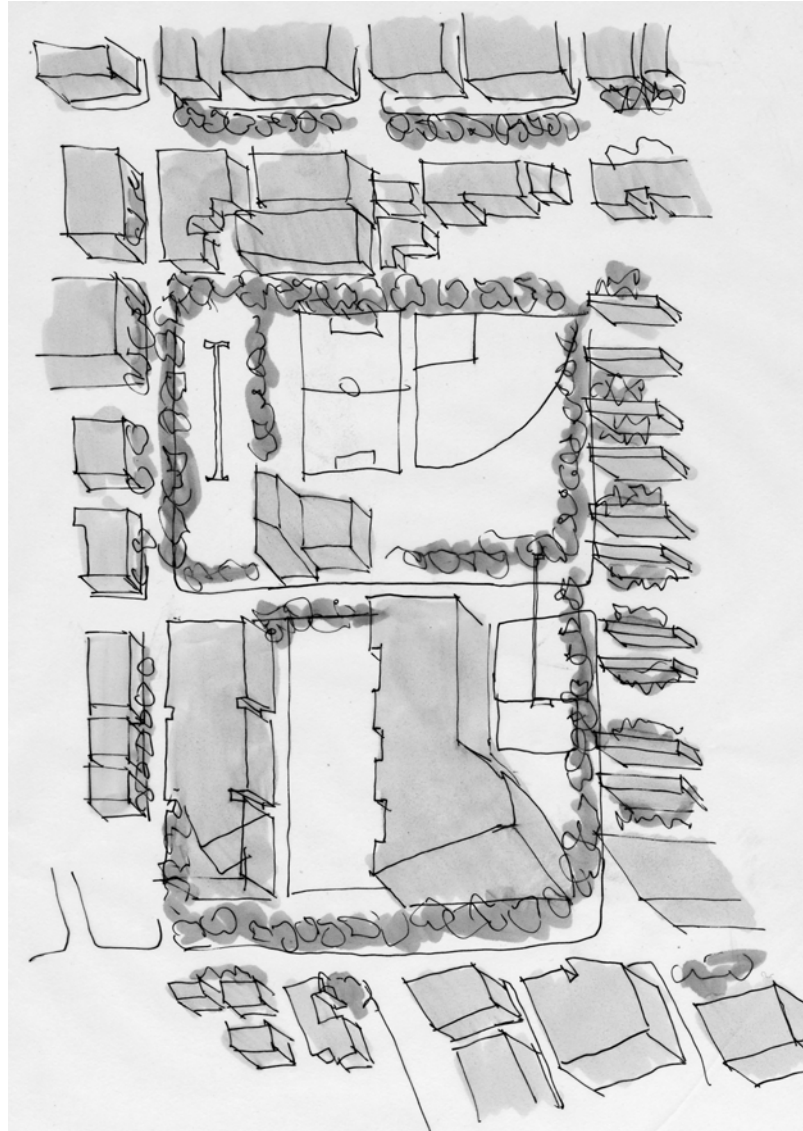


FIGURE 51: Gridded scheme, plan view.



52: Gridded scheme axonometric view

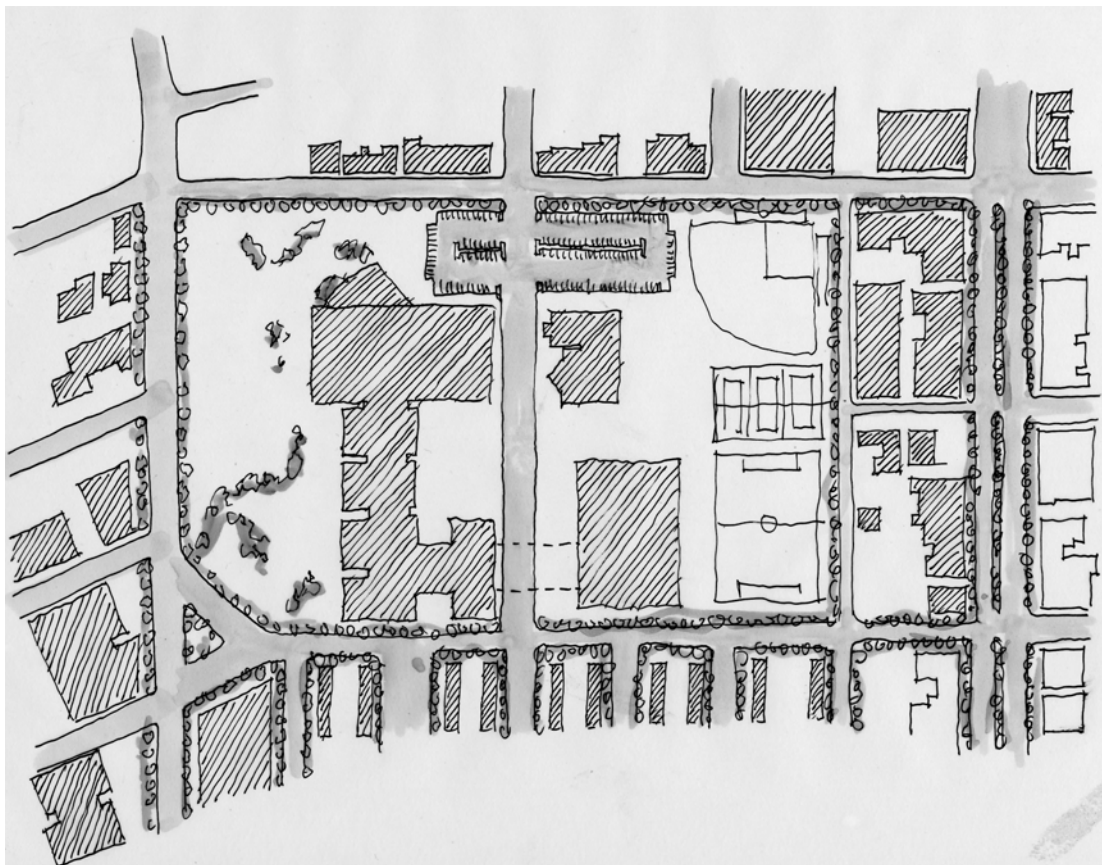


FIGURE 53: Molecular scheme plan view

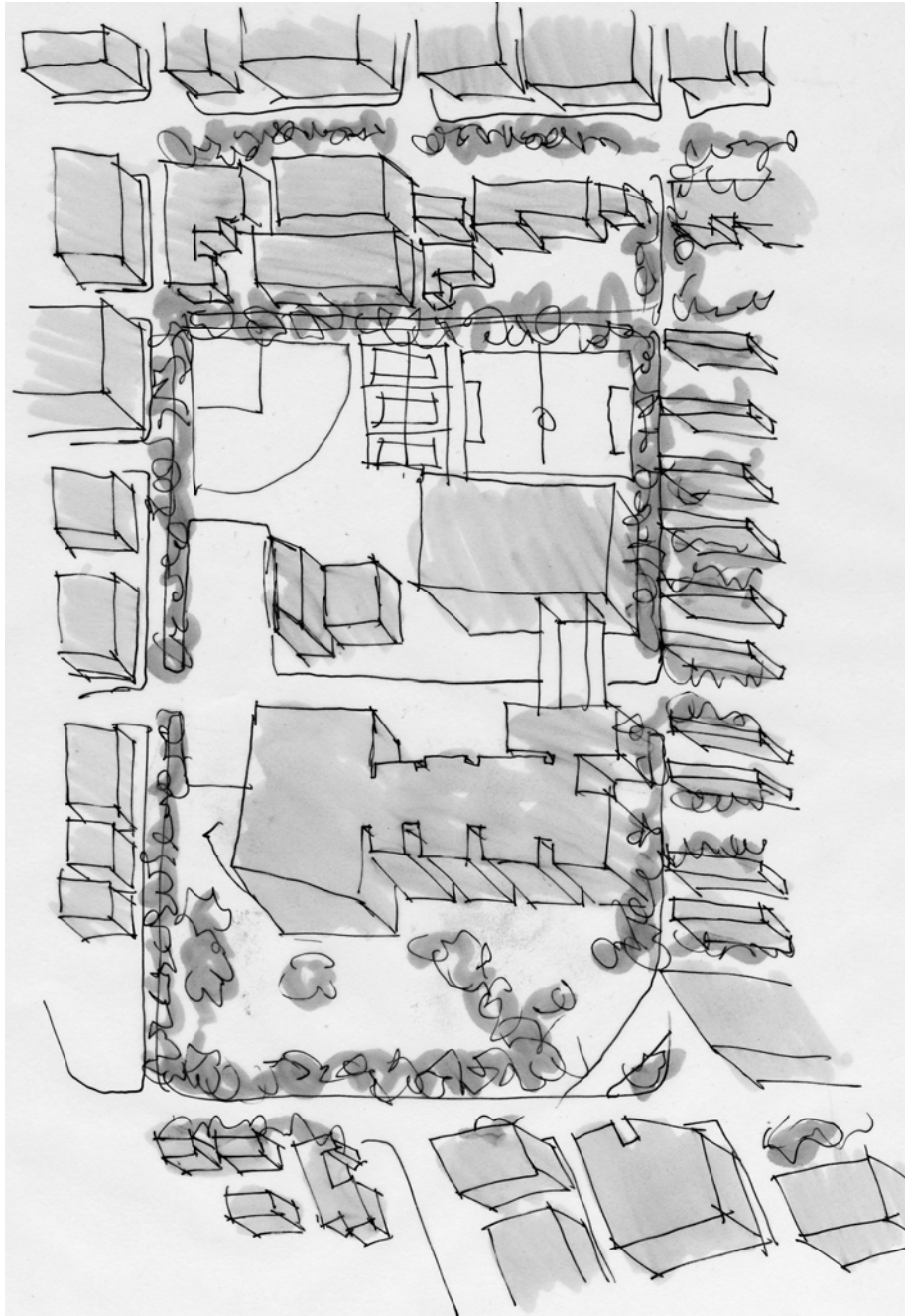


FIGURE 54: Molecular scheme axonometric view

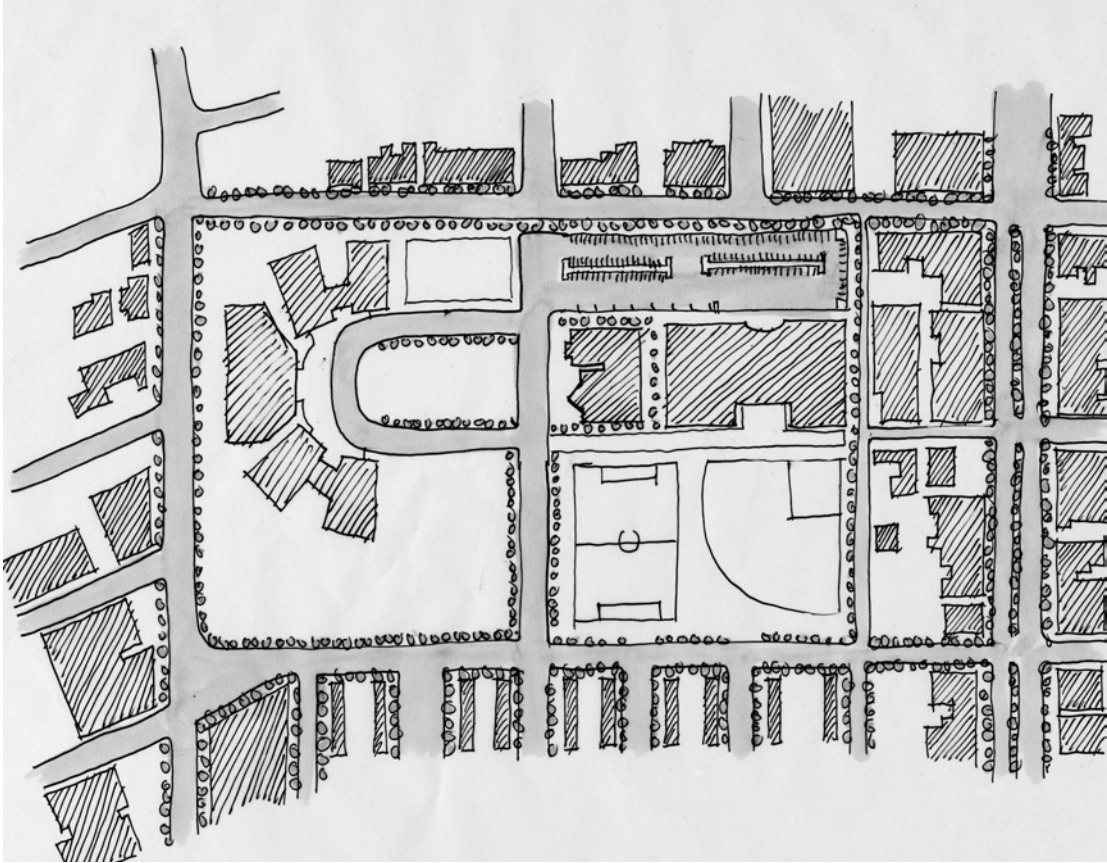


FIGURE 55: Radial scheme plan view

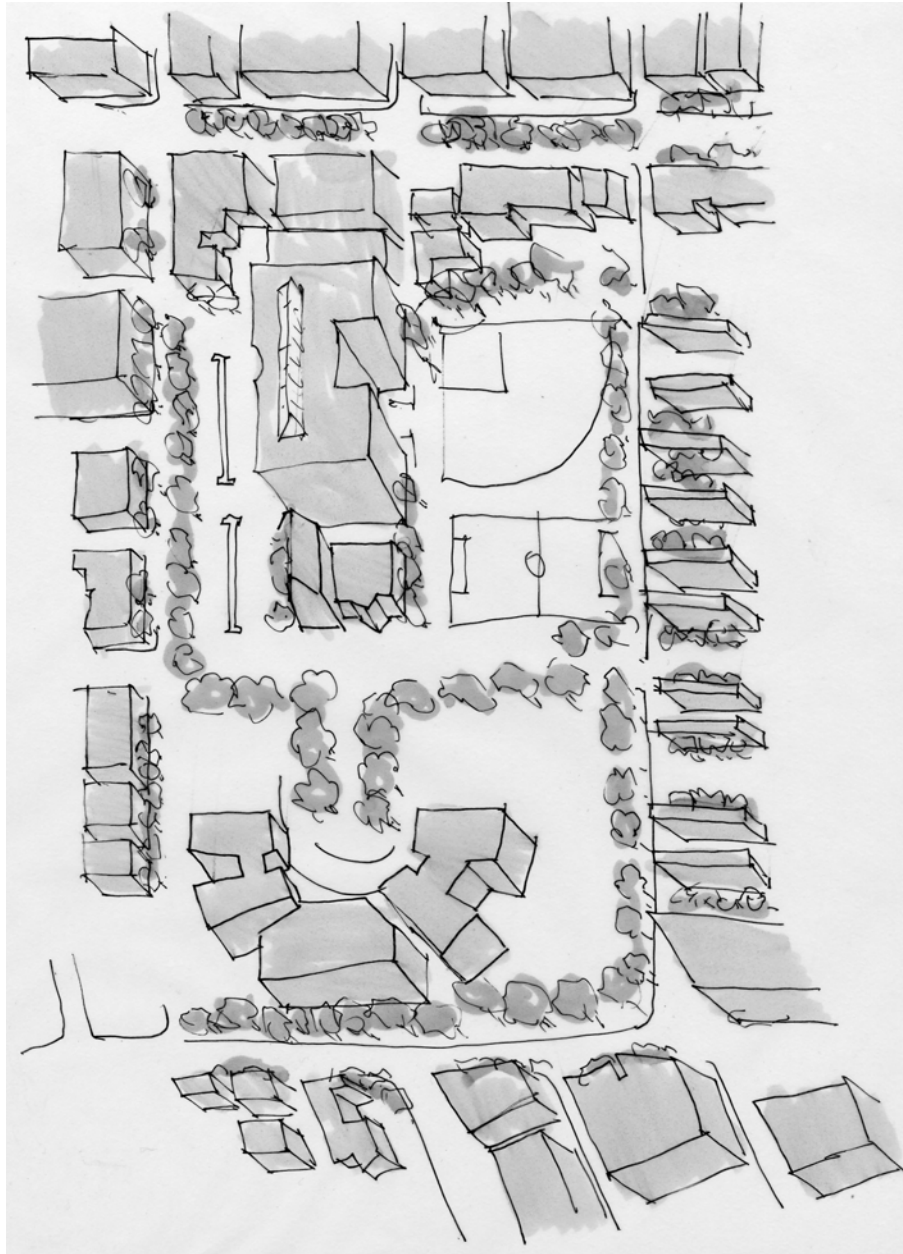


FIGURE 56: Radial scheme axonometric view

DESIGN CONCLUSIONS:

Further analysis of the site and program lead this thesis on a new path during the design phase. The pursuit of a campus inspired plan of development was abandoned for a more fitting conclusion to the site. In addition the original site was moved to a more appropriate location. The Program was amended and the site was reduced in size. The campus parti sketches were replaced by three schemes which reflected the physical impact of the school building itself and the addition of a public park as an extension of the community's involvement with the school's facilities.

CONTINUED SITE ANALYSIS:

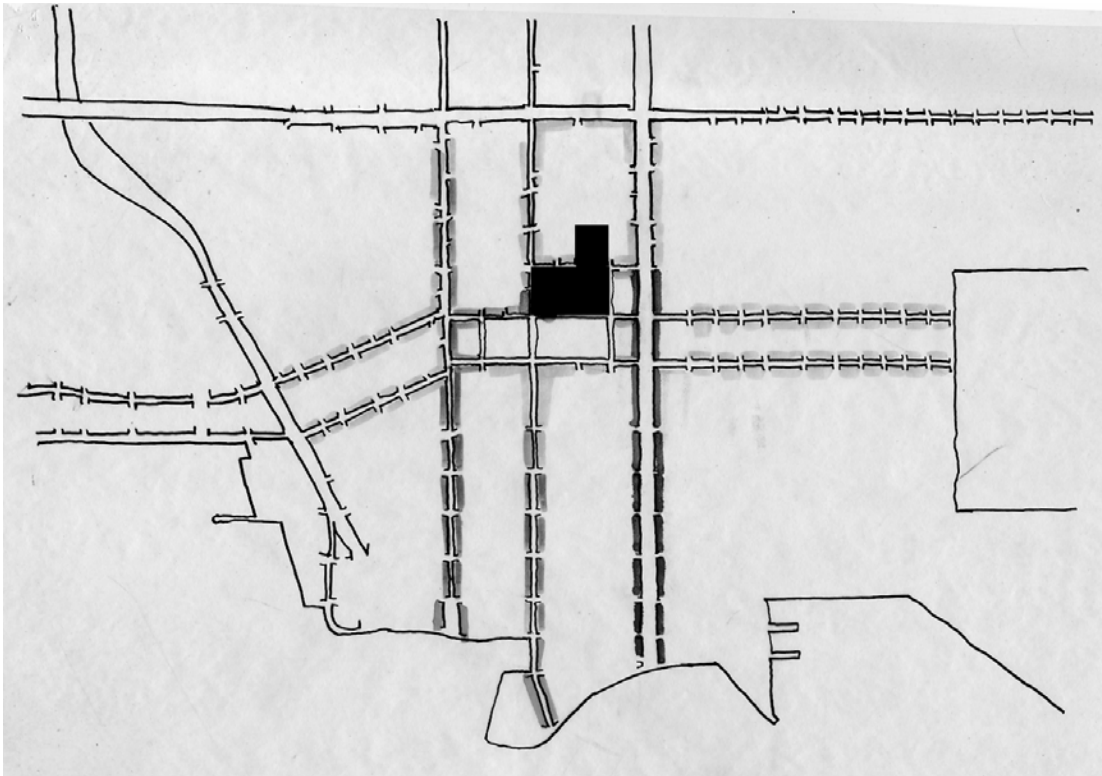


FIGURE 57: Major street system through old site.

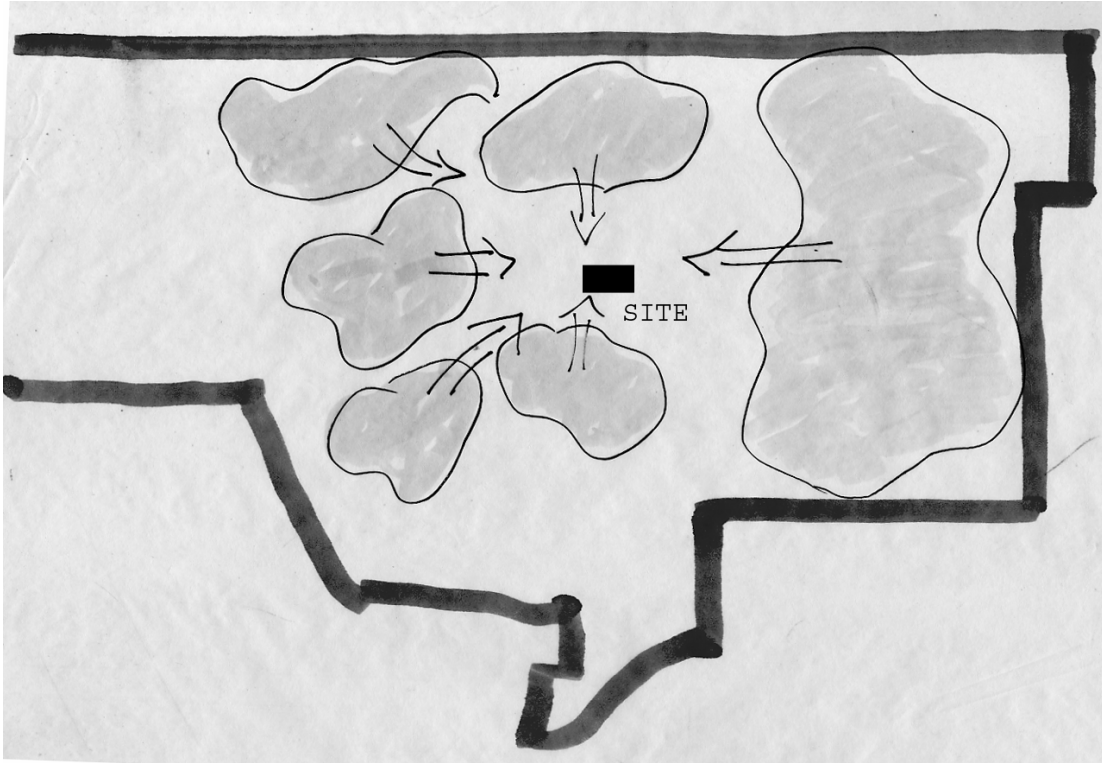


FIGURE 58: New and existing neighborhoods physically defining site placement

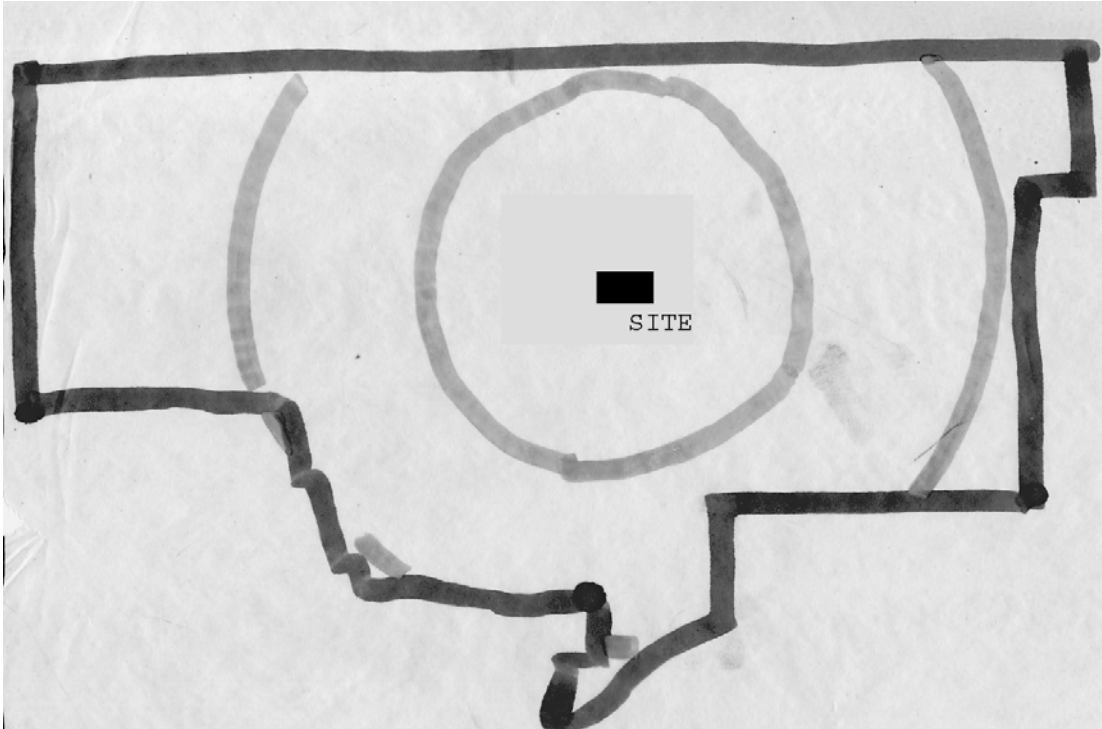


FIGURE 59: Walking distance from site in 1/4 mile increments.

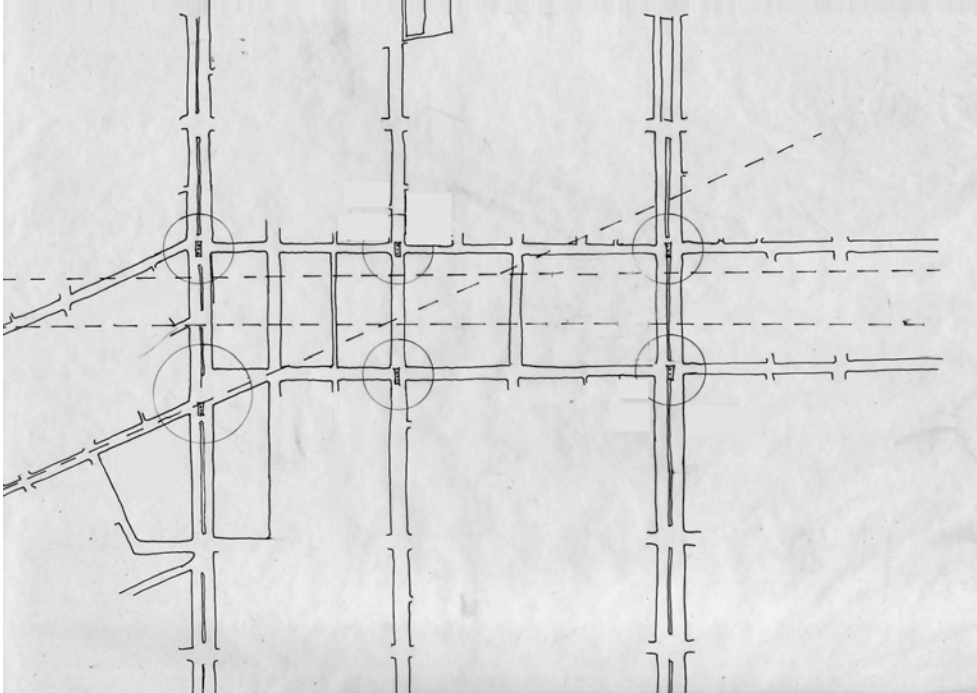


FIGURE 60: New site strategy based on Pratt street axis and Lombard and Pratt Street corridor

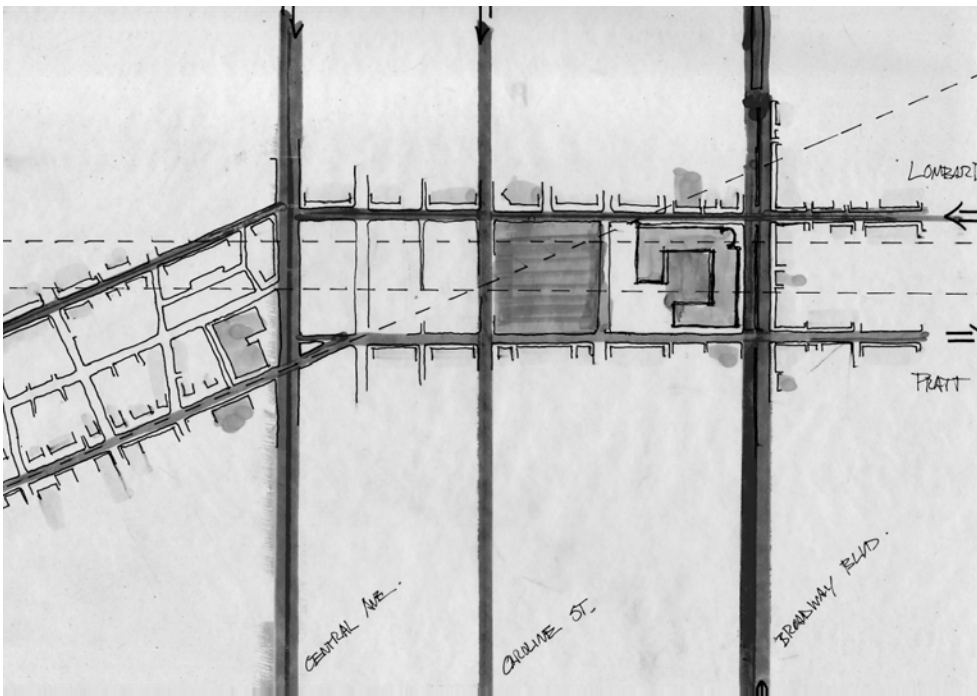


FIGURE 61 New site and building parti strategy

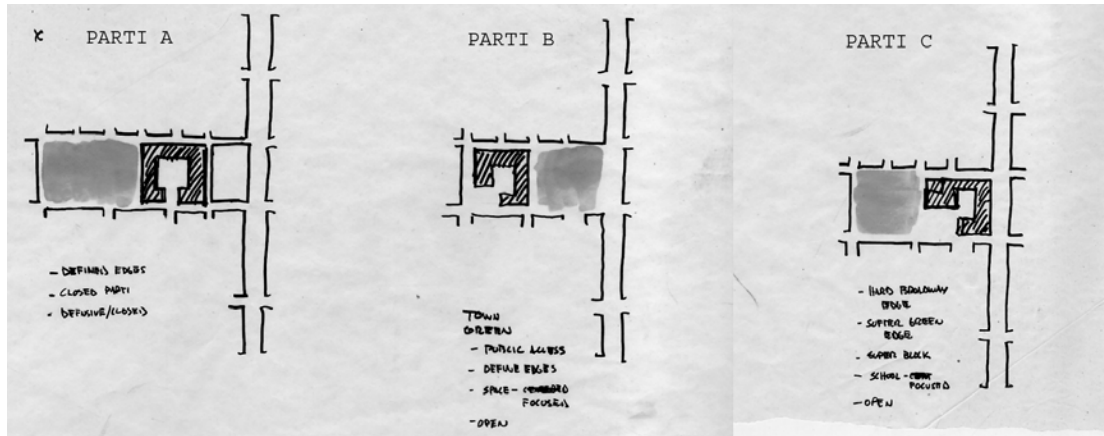


FIGURE 62: Subsequent generation of schemes

These three schemes represent a progression from the initial site location. In keeping with the notion that the new school represents an image of the community it was determined that having a more direct relationship with Broadway was appropriate. In order to have an impact on the community the building must be visually and physically accessible to the neighborhood. Parti C. was chosen for its placement on Broadway for the opportunity of a figural entrance on a major street, separation of a high traffic situation from playing fields, and an opportunity for a separate entrance for community program between the playing fields and school.

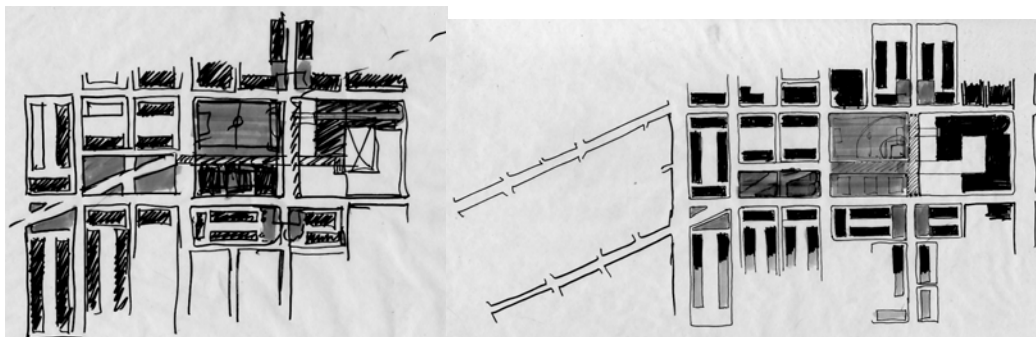


FIGURE 63: Urban process drawings. Initial approach dealt with relationship between building and Pratt Street axis. The addition of a public square would act as an extension of the school and provide the an amenity much needed in the community.

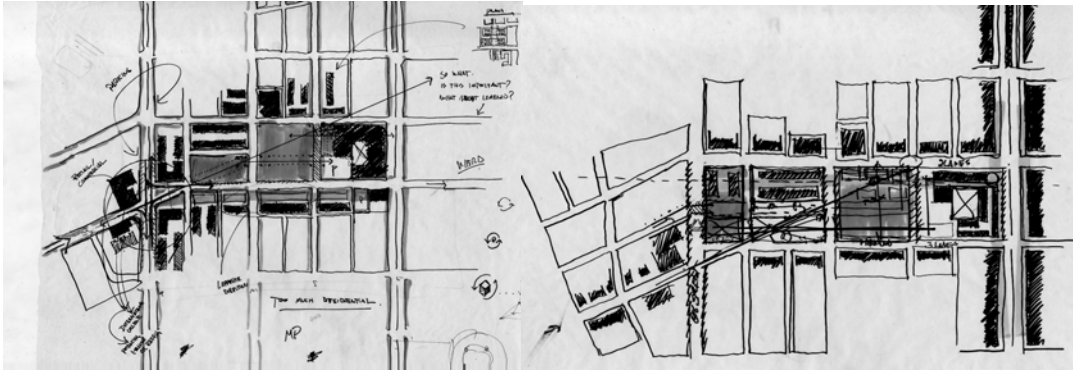


FIGURE 64: Urban process drawings. An extension of the green space was entertained along Pratt Street from the intersection of Central Avenue to Broadway but was discarded out of impractical vehicular movement and redundancy.

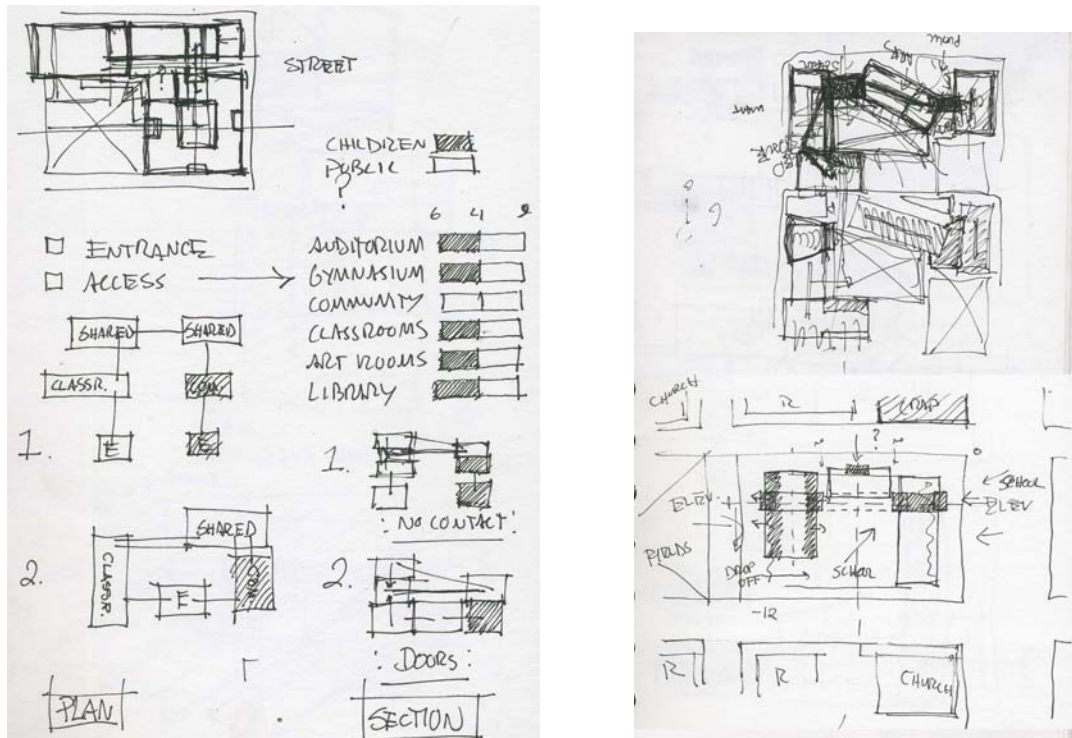


FIGURE 65: Building process drawings. Building parti began with a courtyard scheme with consideration to both exterior access and separation of public and private program. Use diagram dictated the activity of the building during different periods of the day, concluding that all potential shared pieces of program be grouped together and the educational wing or classrooms be regulated.

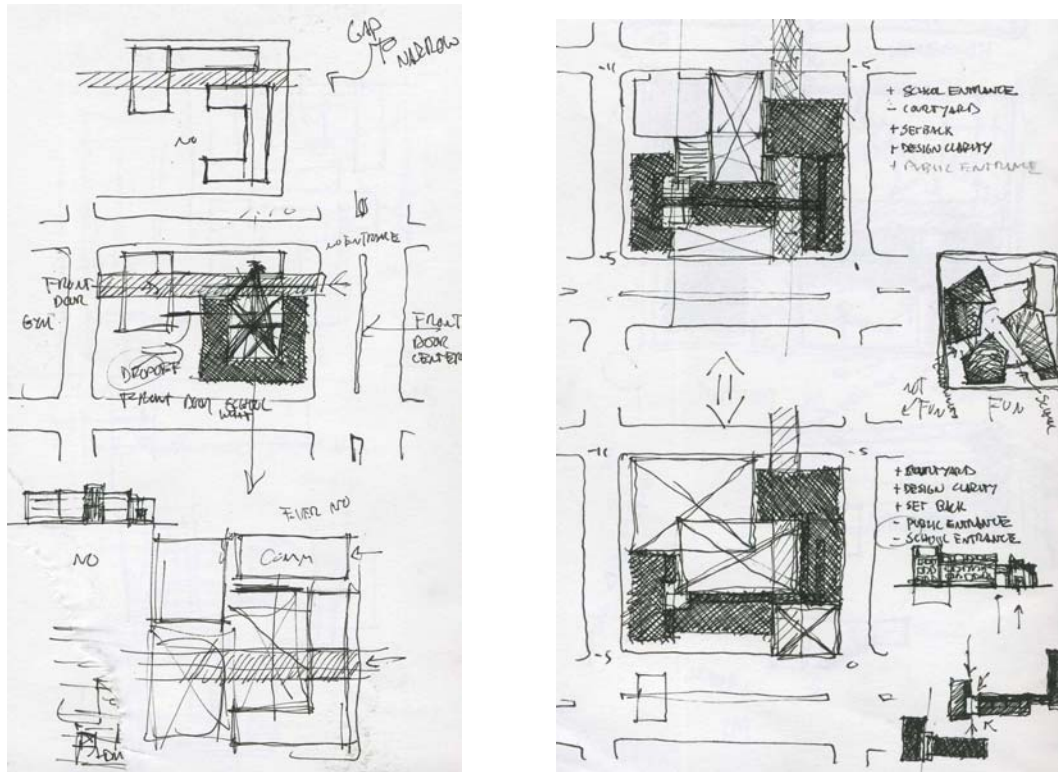
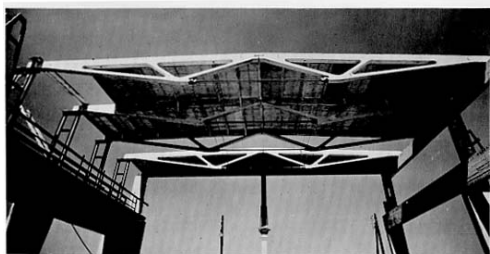
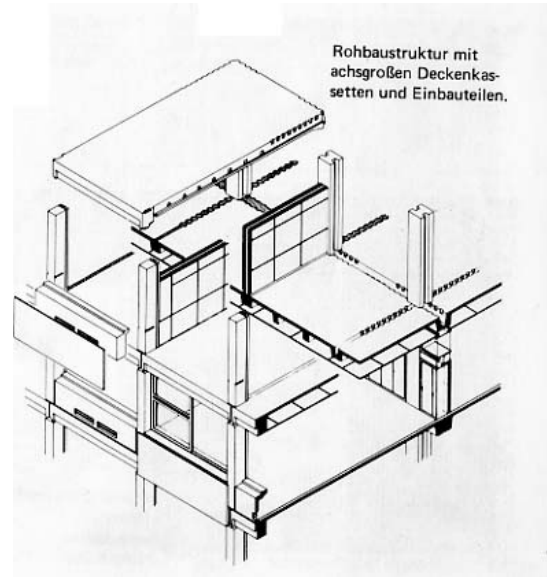
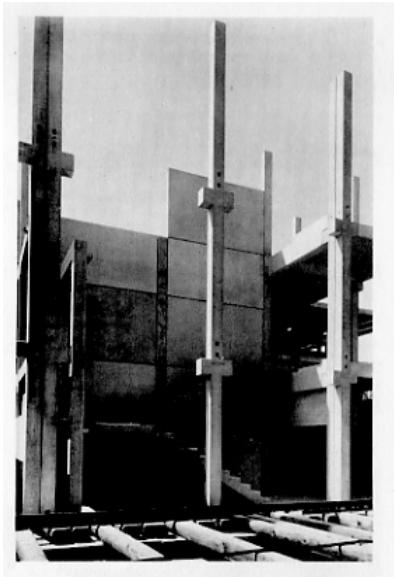


FIGURE 66: Building process drawings. Further development lead to articulation of specific program elements. In addition, Placement of major circulation was determined relative to program need and courtyard exposure.

Building design reflected the separation of shared spaces and classrooms. The shared spaces: gymnasium, auditorium, cafeteria, library, and music and art rooms were grouped together in the North and West wing of the building. In addition the Community spaces for Social services, health care, guidance, and recreation management were also placed under the gymnasium allowing for a separate public entrance that could be used throughout the day without contact with the school. This parti made the main entrance on the corner of Broadway and Lombard a logical choice. Further the entrance became a prime candidate for a figure expression of the building.



Leichte St.B.-Binder mit Zugband.

Schnitt 1-1.

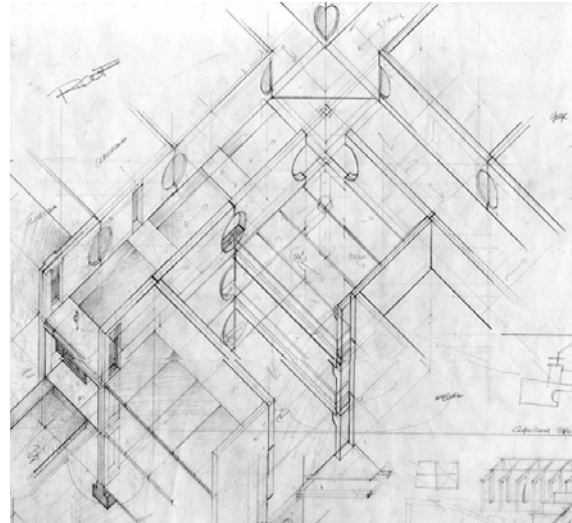
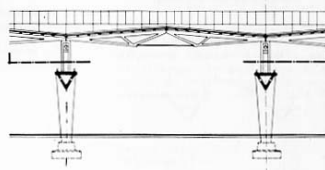


FIGURE 67: Structural Process drawings. Precast concrete was chosen as the primary building material for both its durability and efficient erection. New schools are in need and quick efficient assembly and precast construction is a good alternative.

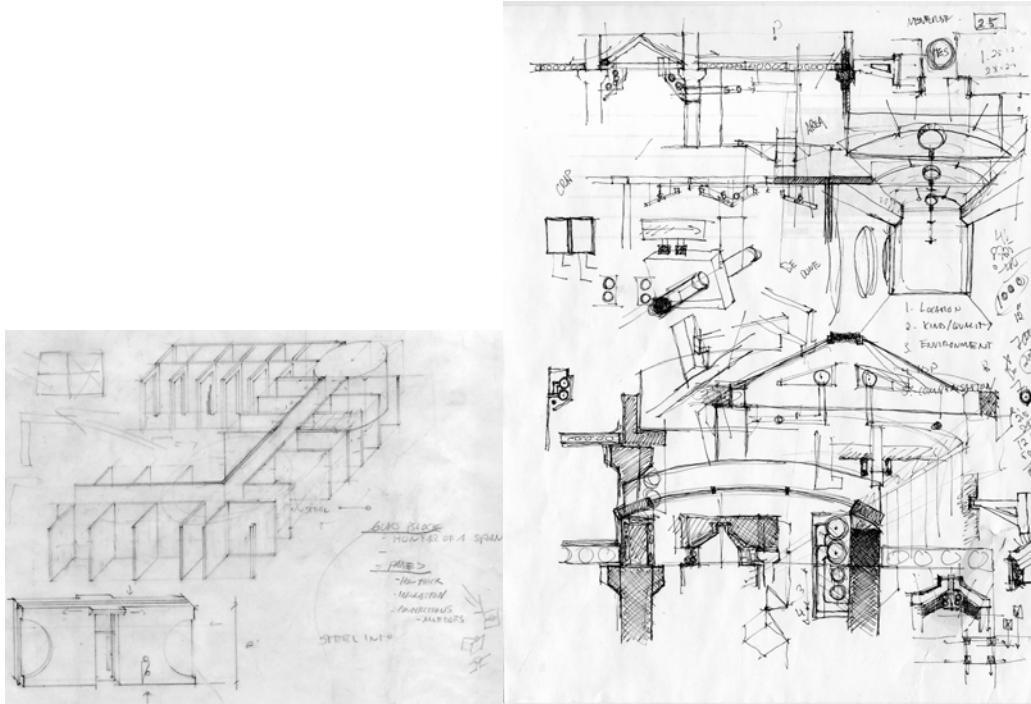


FIGURE 68: The structure is composed primarily by repeating prefabricated insulated wall sections that form the classroom corridors. The strength of this interior wall allows for a transparent hall floor. The traditional double loaded corridor common in urban schools is challenged by an abundance of natural light that streams uncompromised through each floor in the main classroom wing.

The Structure of the building was chosen as an exploration of efficient building materials and for an aesthetic which represents both rigor and reflection. The character of well designed precast concrete members can resemble the structure, rhythm, and formality of the classical orders while enabling the designer to pursue and abstraction of traditional form in an attempt to create a contemporary architecture of contemplation and exploration which is fitting for the role of a school. Inspiration and motivation were the two driving forces behind this structural and exterior material choice.

FINAL DESIGN:

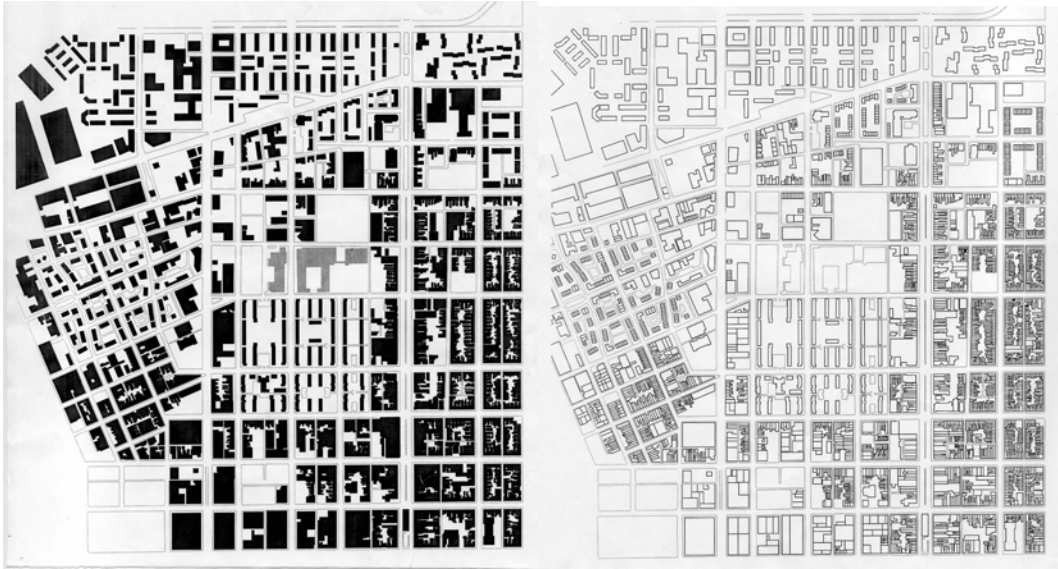


FIGURE 69: Existing Conditions (Figure Ground/Footprint)

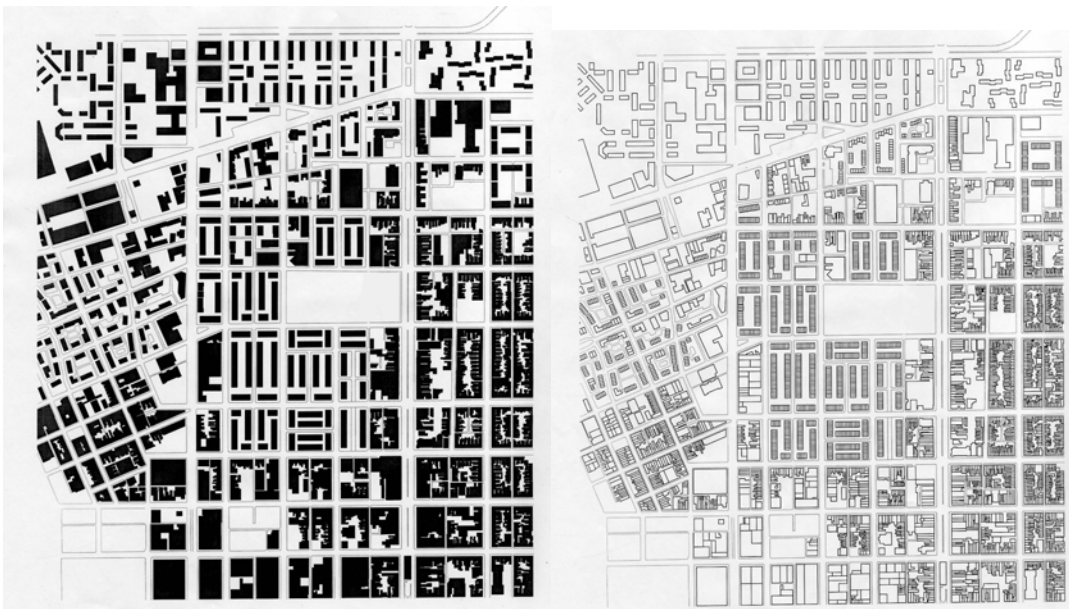


FIGURE 70: Intervention (Figure Ground/Footprint)

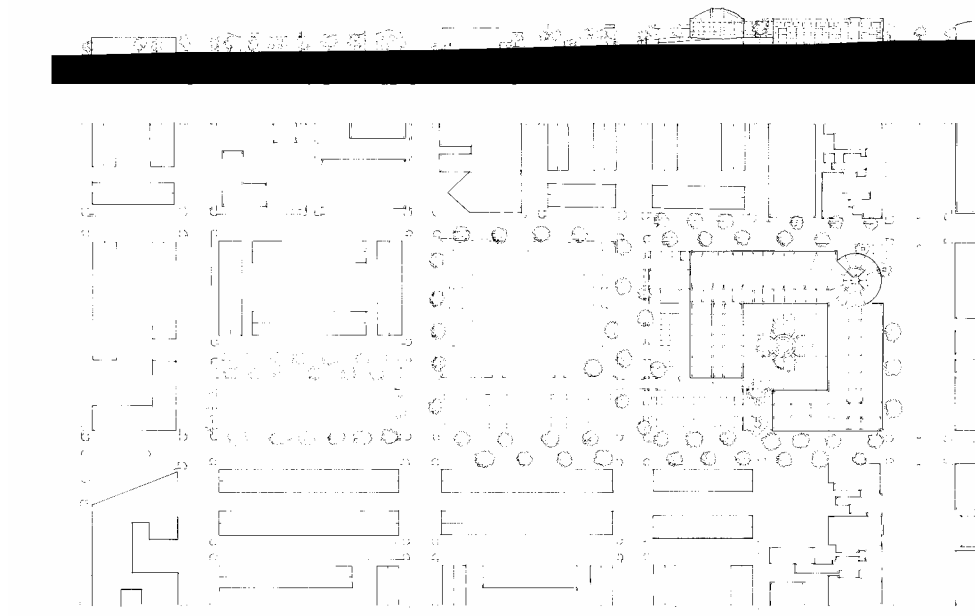


FIGURE 71: SitePlan

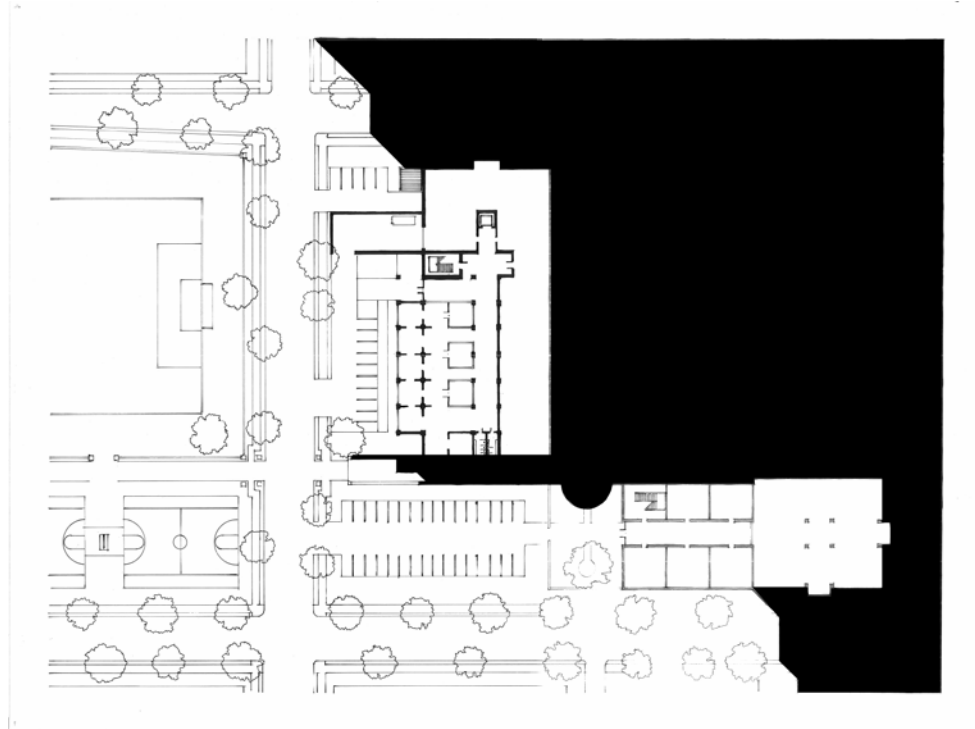


FIGURE 72: Lower Level Plan

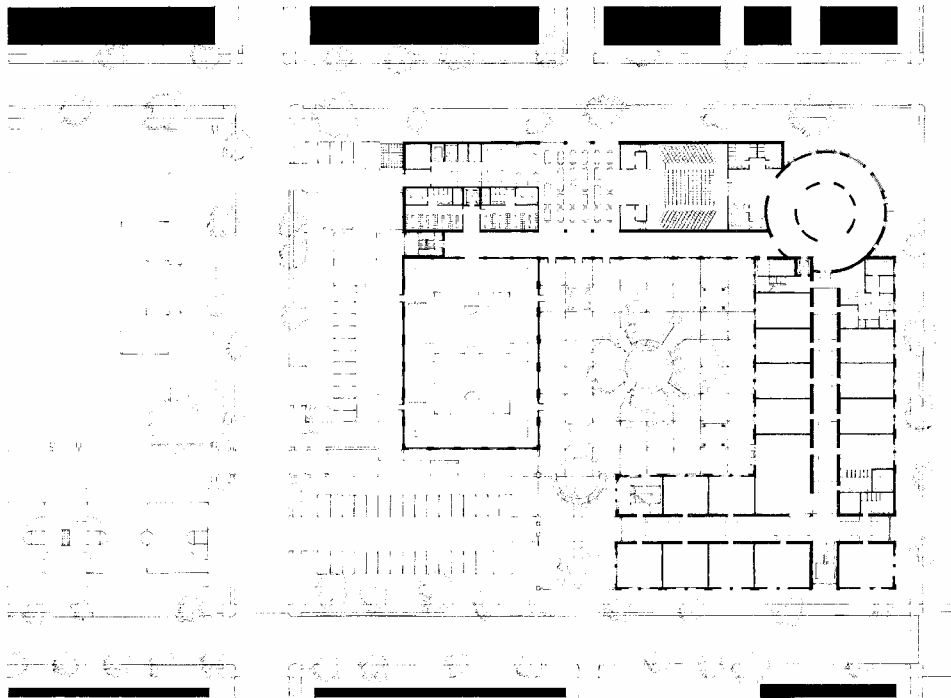


FIGURE 73: Entry level Plan

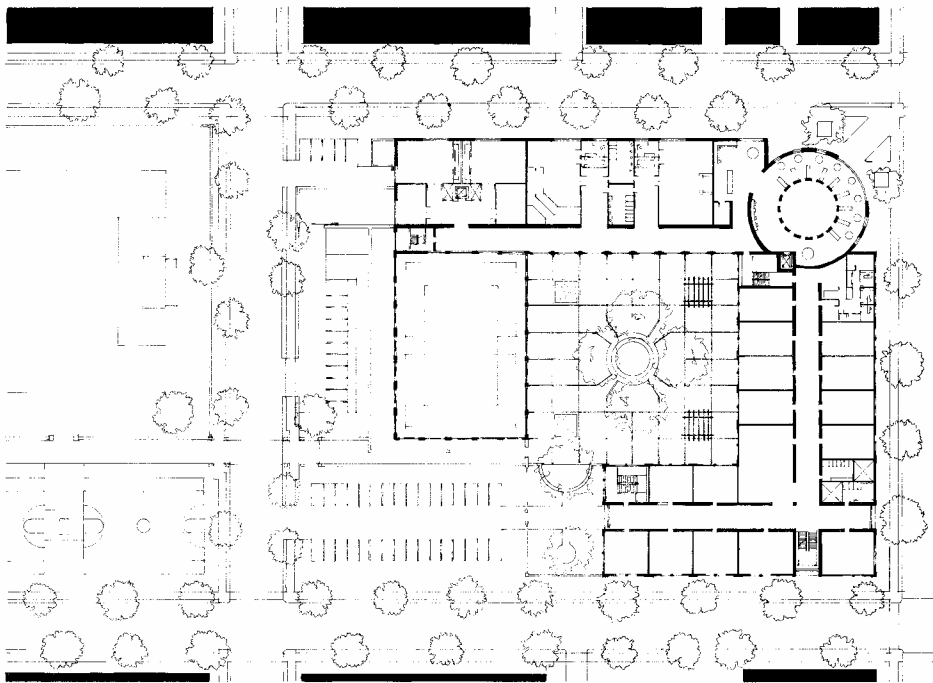


FIGURE 74: Second Floor Plan

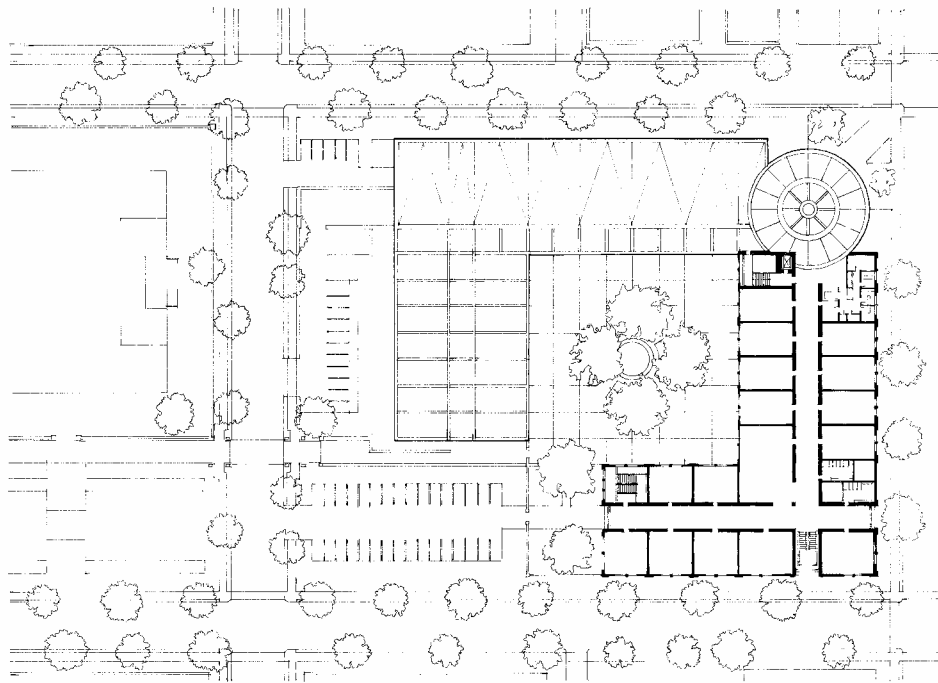


FIGURE 75: Third Floor Plan

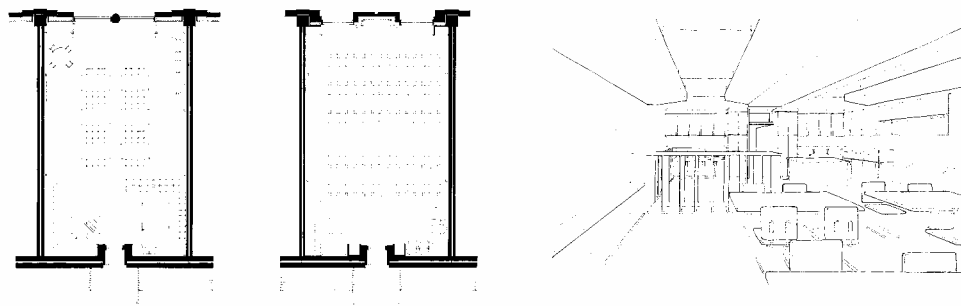


FIGURE 76: Classroom A. Plans

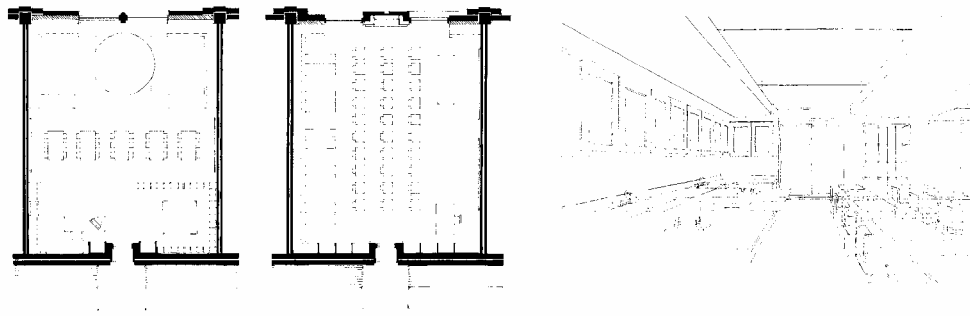


FIGURE 77: Classroom B. Plans



FIGURE 78: Cross Section

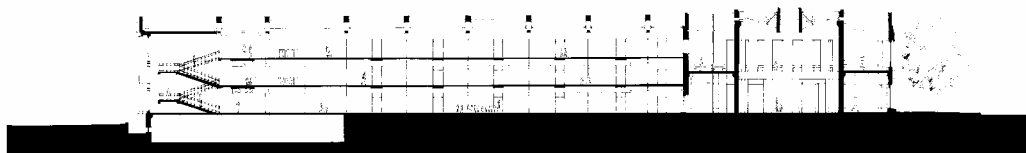


FIGURE 79: Longitudinal Section

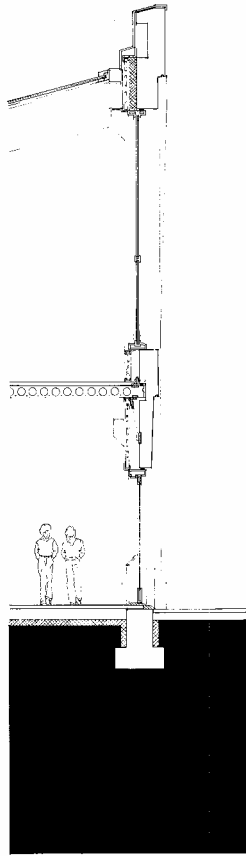


FIGURE 80: Wall Section

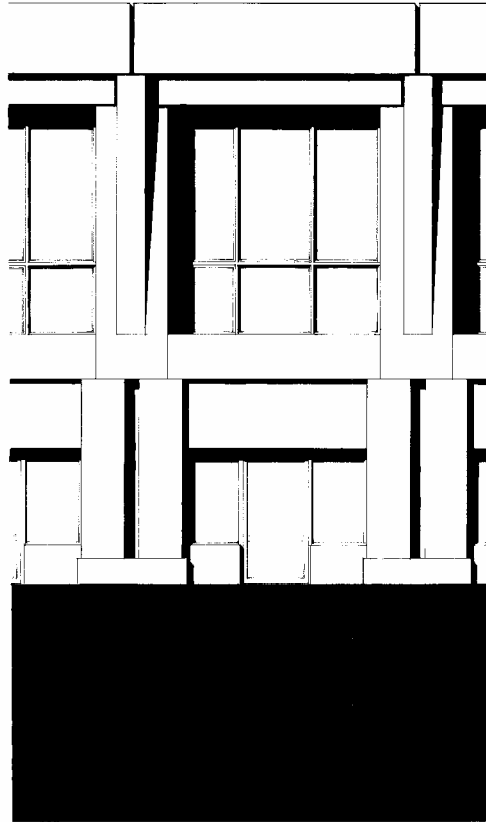


FIGURE 81: Section Elevation



FIGURE 82: East Elevation



FIGURE 83: South Elevation

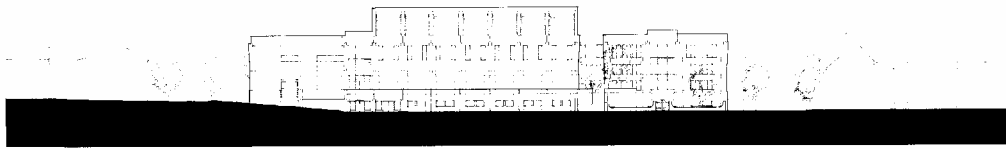


FIGURE 84: West Elevation



FIGURE 85: Axonometric

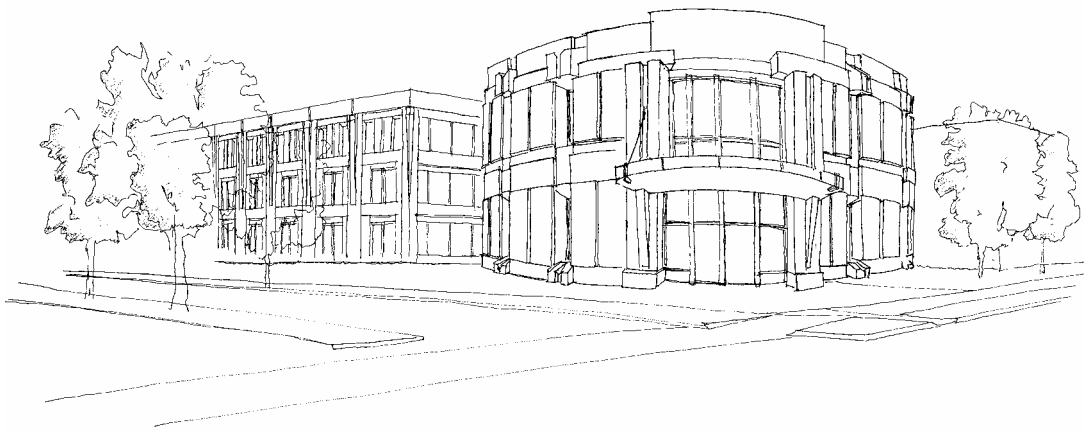


FIGURE 86: Entrance Perspective



FIGURE 87: View of Courtyard

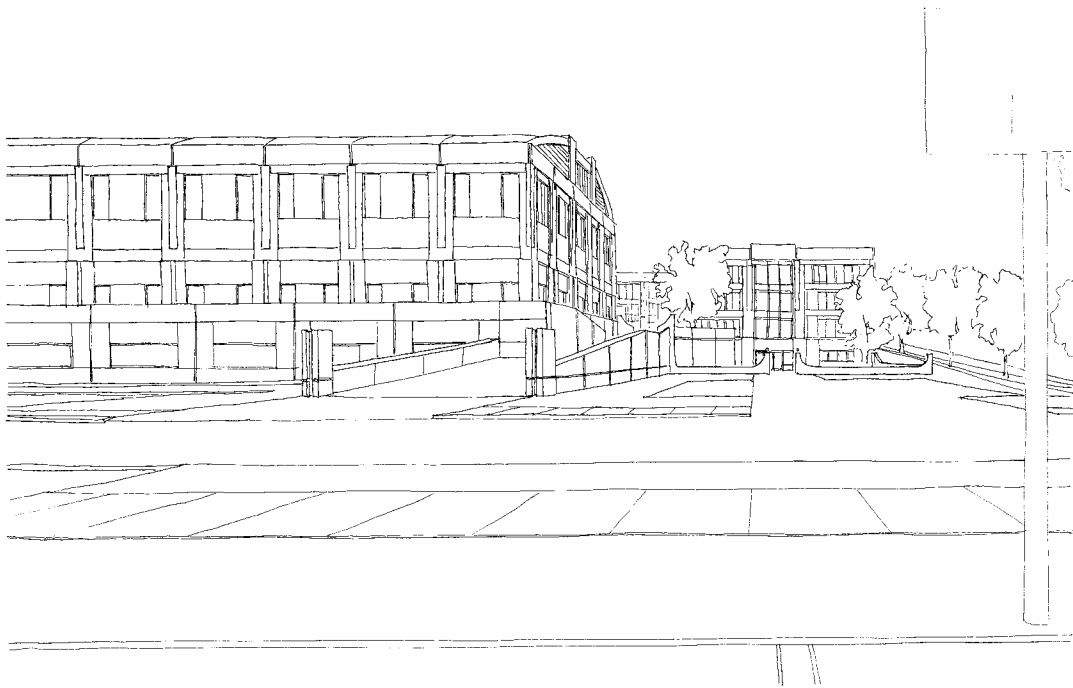


FIGURE 88: View From Playing Fields



FIGURE 89: View From Cafeteria

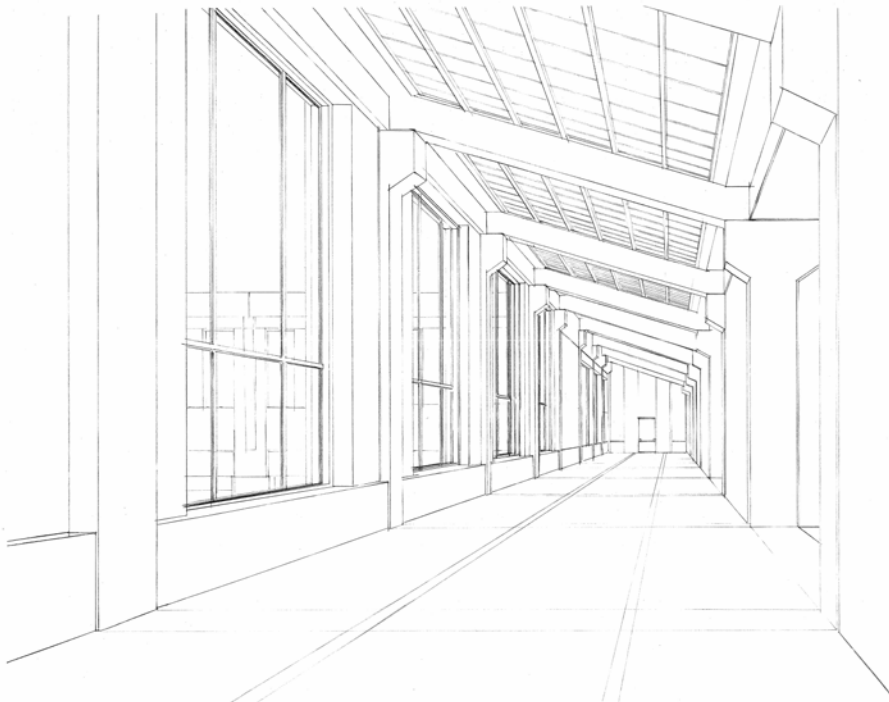


FIGURE 90: View through Corridor

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