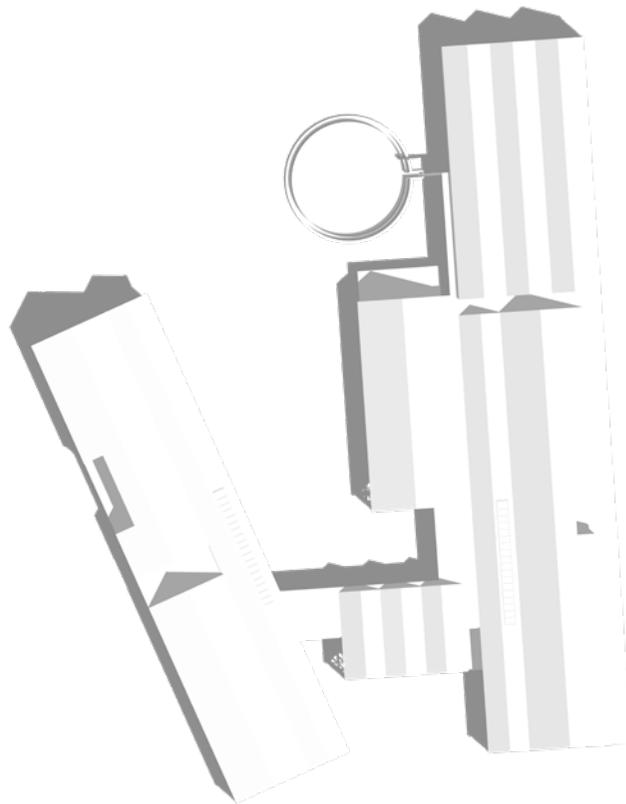


Rethinking Dead Malls:

Reconsidering an American vacant mall site as a seed for re-growth



Rethinking Dead Malls:

Reconsidering an American vacant mall site as a seed for
re-growth

MD Abu Baker Siddique

Thesis submitted to the faculty of the Virginia Polytechnic
Institute and State University in partial fulfillment of the re-
quirements for the degree of

Master of Architecture
In
Architecture

Susan Piedmont-Palladino
Paul Kelsch
David Lever

May 12th, 2021
Alexandria, Virginia

Keywords: Dead Malls, Revitalization, Rethink, Stormwater
, Suburban Sprawl, Reading PA, Urban Farming, Commu-
nity Complex, Suburban Neighborhood, Recreation, Re-
development, Community Asset

Rethinking Dead Malls:
Reconsidering an American vacant mall site as a seed for re-growth

ABSTRACT

The rapid urban development has impacted a great loss of natural landscape in the U.S in recent years. In the process of urbanization, the population has moved from the city centers to the edges of the Metropolitan or the newly developed suburbs as much as 62% until 2000. The annual conversion rate of undeveloped land to developed land between 1982 and 1992 was 1.4 million acres per year while it accelerated later in only five years between 1992 and 1997 to 2.2 million acres per year. Among all the development one of the most common was the Enormous shopping mall in suburban districts which are the collections of a vast range of retail corporations in response to the growing consumerism. In support of the gigantic malls, more service infrastructures were built as in the multistoried parking garages, surface parking, HVAC.

Currently, the total number of malls in the U.S is approximately 116,000. The downside of the development has been observed as rapid as it has grown. As in 2014, nearly 3% of all the malls in the United States were considered to be “dying” (40% or higher vacancy rates) and nearly one-fifth of all malls had vacancy rates considered “troubling” (10% or higher). The sudden deterioration was caused because of several factors such as the socio-economic change of the demography in the urban context, the change in the spending habit of the consumers (i.e. spending for experience rather than goods), the rise of E-commerce, etc. While the dying circumstance continues, these vast and trapped places have nothing but negative impacts in the urban environment as being wasteful land, blocking the visual connectivity through places, clogging the pedestrian flow, contributing to the heat island effect. Thus the problem is evoking to rethink a sustainable design approach

. This thesis will first generate an adaptive master plan for the future, in a specific site as the result of investigating the socio-economic issues that forced the mall site to be vacant. After projecting the master plan, the architectural project will be proposed which will prioritize the physical and social development of the context. Educating people regarding the redevelopment of the community and the sustainable way of living are the key features of the project. The new project will be considered an iconic community asset that would serve the neighborhoods.

Rethinking Dead Malls:
Reconsidering an American vacant mall site as a seed for re-growth

GENERAL AUDIENCE ABSTRACT

The rapid urban development has impacted a great loss of natural landscape in the U.S in recent years. In the process of urbanization, the population has moved from the city centers to the edges of the Metropolitan or the newly developed suburbs as much as 62% until 2000. To serve the resettled population new services have been developed at the outskirts of the cities. Among all the development one of the most common was the Enormous shopping mall in suburban districts which are the collections of a vast range of retail corporations in response to the growing consumerism. In support of the gigantic malls, more service infrastructures were built as in the multistoried parking garages, surface parking, HVAC.

Currently, the total number of malls in the U.S is approximately 116,000. The downside of the development has been observed as rapid as it has grown. As in 2014, nearly 3% of all the malls in the United States were considered to be “dying” (40% or higher vacancy rates) and nearly one-fifth of all malls had vacancy rates considered “troubling” (10% or higher). The sudden deterioration was caused because of several factors such as the socio-economic change of the demography in the urban context, the change in the spending habit of the consumers (i.e. spending for experience rather than goods), Rise of the E-commerce, etc. This thesis will explore the strategy for reintegrating the troubling mall sites within the urban fabric.

The thesis will first generate an adaptive master plan for the future, in a specific site as the result of investigating the socio-economic issues that forced the mall site to be vacant. After projecting the master plan, the architectural project will be proposed which will prioritize the physical and social development of the context. Educating people regarding the redevelopment of the community and the sustainable way of living are the key features of the project. The new project will be considered an iconic community asset that would serve the neighborhoods.

ACKNOWLEDGEMENTS

Thanks to my committee members Susan Piedmont-Palladino, Paul Kelsch, David Lever whose sincere guidance kept me on track through this year-long journey. Their marvelous combination of expertise and suggestions gave my thesis dynamic dimensions.

Thanks to my wife for being a great support through all of my difficult times. Our discussions regarding the project got me going while I was stuck with the dilemmas.

Thanks to my parents for supporting me in every aspect of my life. Without you, I would not be who I am today.

Thanks to my friends and peers for their support during the difficult times of the pandemic, for inspiring me, and keep me going.

TABLE OF CONTENTS

PART 1		
BACKGROUND		
	Introduction	1-8
	Causes of the Deterioration	9-10
	Effects of the Dead Malls	11-12
	Site Selection	13-16
	The Site	17-20
	Site History	21-22
	The Decline	23-24
	Existing Condition	25-26
PART 2		
PROPOSED MASTER PLAN		
	Proposed master plan & precedent	27-30
	Improving connectivity	31-32
	Improving natural balance	33-34
	Proposed master plan- end state	35-36
	Flexible growth at the nodes as per need	37-38
	Proposed master plan- interim phase	39-40
PART 3		
THE PROJECT: CIVIC COMMUNITY COMPLEX		
	The project_Civic Community Complex	41-42
	Functions and Programs	43-44
	Process_schematic sketches	45-46
	Process_form and material	47-48
	Process_form generaton	49-50
	Process_section sketches and major programs	51-52
	Architectural Plans	53-60
	Perspective views_exterior	61-66
	Section AA (extended)	67-68
	Rain water collection	69-70
	Sections	71-74
	Elevations	75-76
	Perspective views_interior	77-82
	Details & Structural System	83-84
	End notes, Image Credits and Bibliography	85-86

“There is currently more sprawl covering American soil than was ever intended by its inventors. While there are some people who truly enjoy living in this environment, there are many others who would prefer to walk to school, bicycle to work, or simply spend less time in the car.”

— **Andres Duany**, *Suburban Nation*

“Landscape is a medium uniquely capable of responding to temporal change, transformation, and adaptation, as Corner, Allen, and others recalled. These qualities recommend landscape as an analogue to contemporary processes of urbanization and as a medium uniquely suited to the open-endedness, indeterminacy, and change demanded by contemporary urban condition.”

— **Charles Waldheim**, *Landscape as Urbanism*

BACKGROUND

Introduction

The suburban growth in the U.S. has been tremendously escalating since post-World War II to the present time. The earlier shopping malls are one of the major parts of the development, usually situated at the outskirts of the city urban area intended to be connected both to the city and the country areas through the fast-growing highway system. The common imagery of these malls was to conceptualize the traditional main street loaded with retail stores, later with a central atrium, only in an enclosed and controlled environment that welcomes the popular concept of automobile use, facilitating a huge number of cars parking outside. The site design was the building and the parking, connected to the highway networks. The plentiful availability of lands, scant regulations, and easy federal funding has influenced the fast-growing numbers. However, the growth did not turn out very useful as soon as they started to struggle economically due to the over-competitiveness of the retail environment with the newer forms of stores and business and some of them became abandoned. Thus the problem of the dead mall arises.

As an international student, I was always curious about the large and mostly unused sea of parking lots in front of the regular strip centers in the U.S and their impact on the urban environment. My thesis inquiries have started from there. In this thesis, I have explored the urban situation of a similar site with an industrial past, currently facing a socio-economic declination which also contains an abandoned mall within it. My proposal consists of an adaptive master plan that will improve the existing situation to a sustainable urban environment and will help to grow the area with flexible needs. The proposed architectural project will be a catalytic intervention that will guide the overall development.



Figure 1: Connecticut Post Mall, Conn., 1998

"The cities will be part of the country; I shall live 30 miles from my office in one direction, under a pine tree; my secretary will live 30 miles away from it too, in the other direction, under another pine tree. We shall both have our own car. We shall use up tires, wear out road surfaces and gears, consume oil and gasoline. All of which will necessitate a great deal of work ... enough for all."
 —LE CORBUSIER, THE RADIANT CITY (1967)

The rapidity of the subsidized highway system development has influenced the most to grow the malls as suburban sprawl during the post-world development. The problem of suburban sprawling is also largely contributed by the planning of single-use pods for malls and other functions typically wrapped with those high-speed vehicular roads at the edge nodes of the cities. This planning strategy was very effective for the growing numbers of automobile users of the earlier period but lacked pedestrian accessibility which would allow pedestrian access from neighboring places. The single-use pods create a blockage within the urban environment as they allow only to grow but not to improve with time as Dolores Hayden stated, "By 1990s planner Robert Cervero noted that most edge nodes were being built at densities too low for the effective provision of public transport, yet high enough to cause traffic gridlock. Each new pod added to an edge node might be designed for internal circulation, but the parcels tended to agglomerate with no consistent land use planning or traffic circulation beyond the property line"¹.

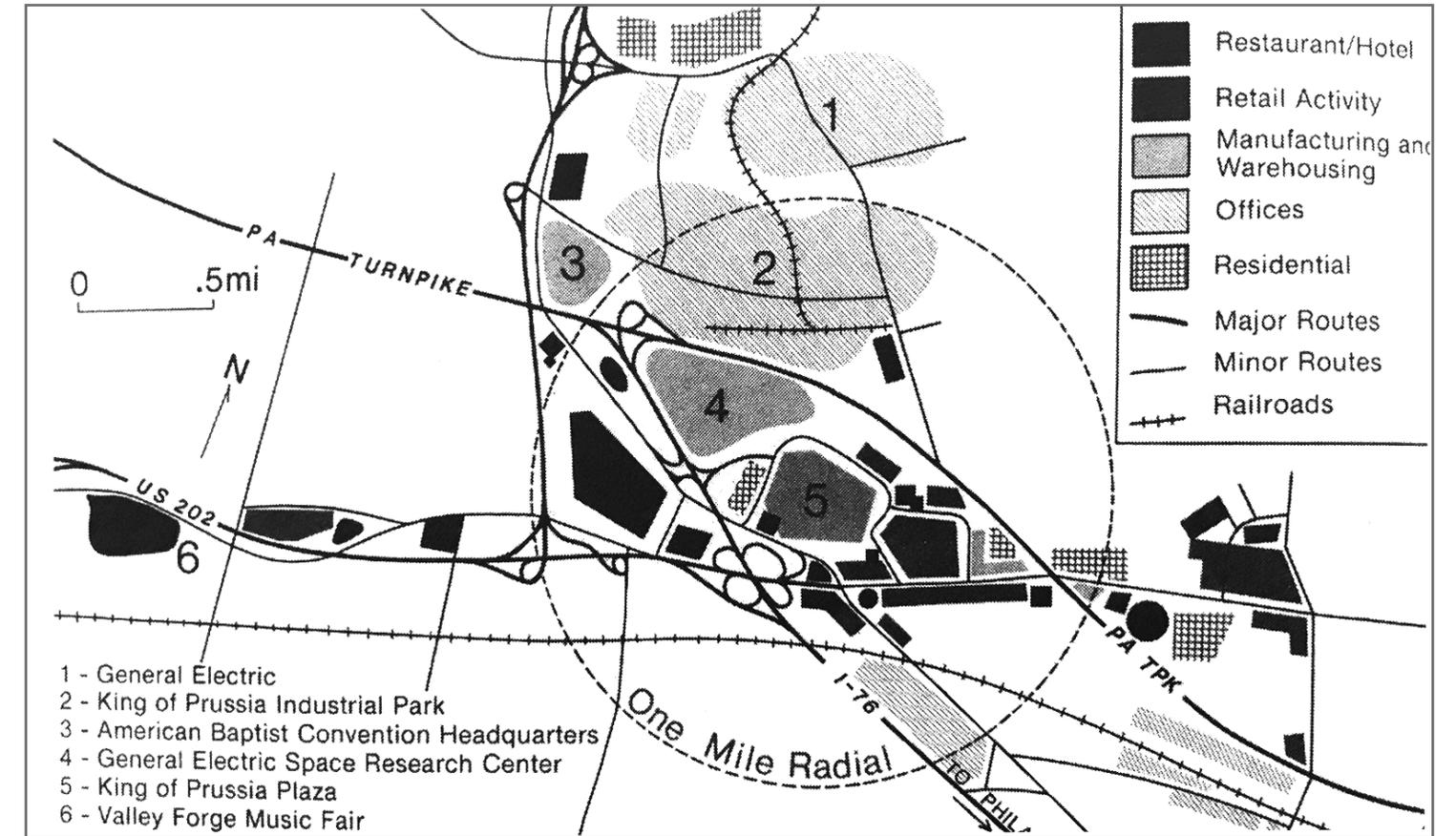
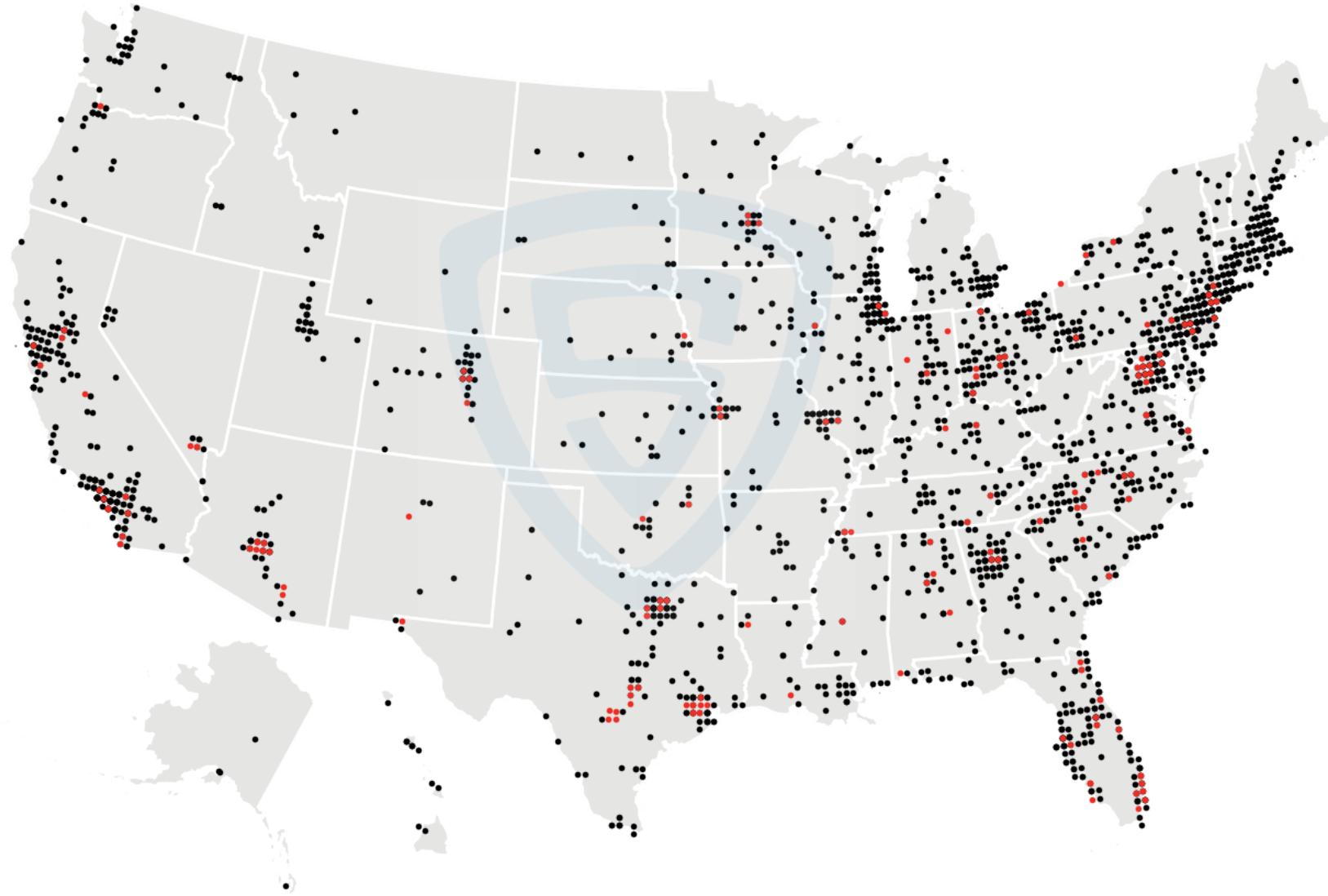


Figure 2: Site plan of edge node at King of Prussia, PA., 1976

● 5 or less ● Greater than 5



TOTAL **116000**



Shopping malls Locations in the USA

Each grid point covers 10-mile radius with at least one location

By 2017, the growth has resulted in approximately 116,000 shopping malls in the U.S. Wherein 1970 the number was 37 thousand. The diagram on the left shows that the East coast has a denser situation.

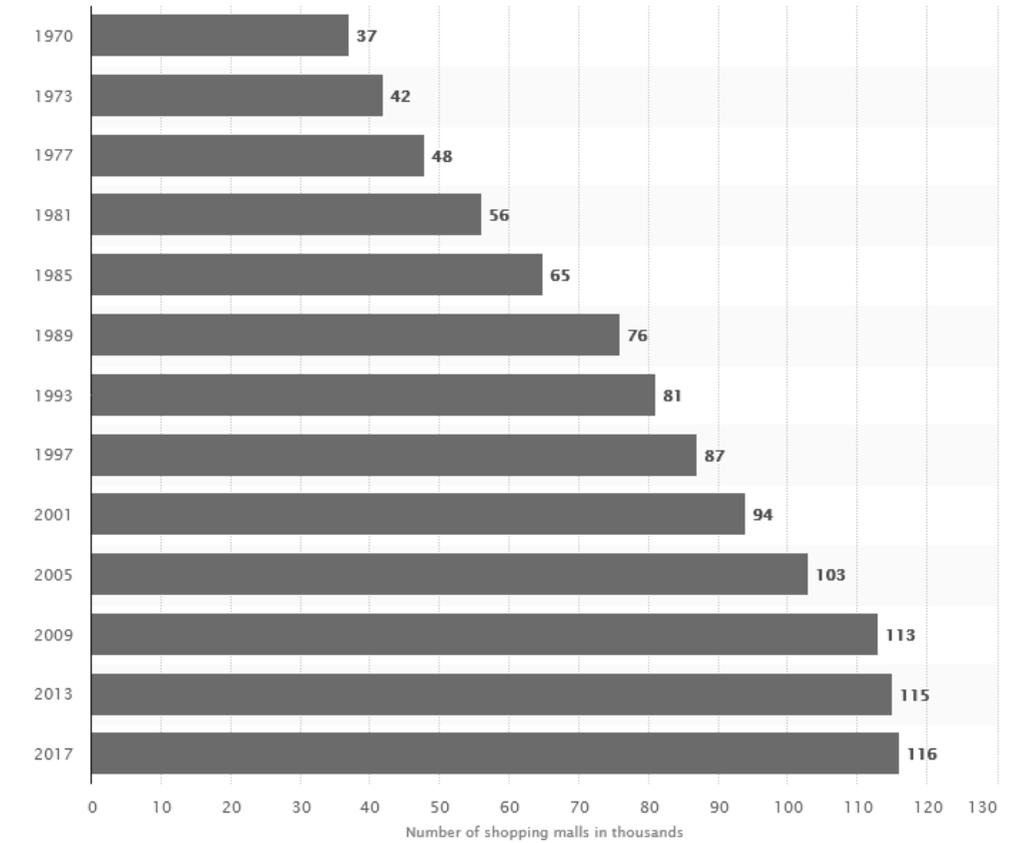


Figure 3: Shopping malls location in the U.S., 2021

Figure 4: Gradual increase of shopping mall numbers graph



Figure 5: Rolling Acres mall in Akron, Ohio



Figure 6: Aerial view of demolished Owing Mills mall in Baltimore, MD



Figure 7: Inside of Rolling Acres mall in Akron, OH

DEAD MALL

According to the CoStar Group and NY Times, when more than 40 percent or more of a mall is vacant and unused, it is considered dead. 10-20 percent vacancy signals a troubling sign.² Dead malls become a challenge for the investor and the neighborhoods both economically and environmentally. Often they are reused with newer uses but that does not completely resolve the environmental and urban issues for the society and the surrounding neighborhoods if the site is not reintegrated sensitively.

3% of the total is considered
“Dying”
20% are considered
“Troubling”

Means **3500** malls are “DYING “ right now!

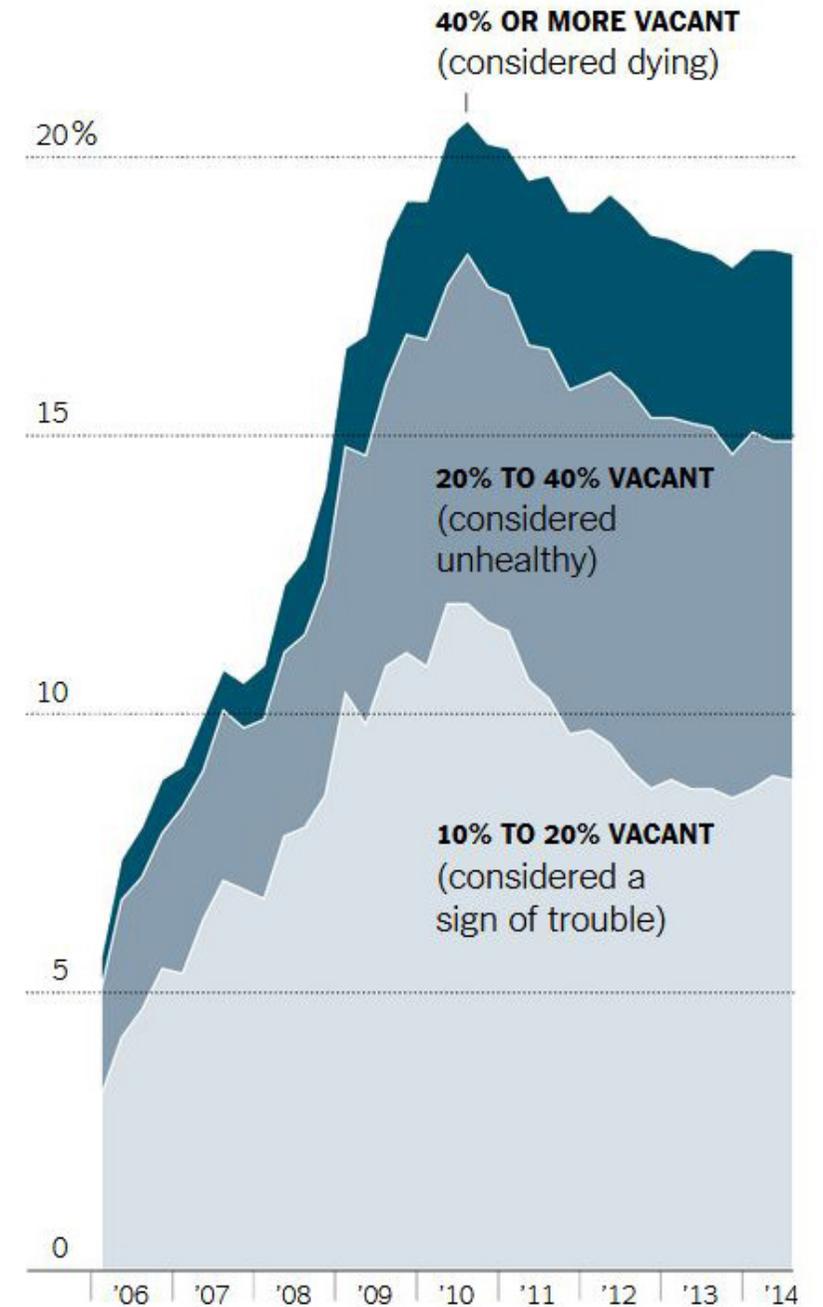


Figure 8: Share of malls with vacancy rates of 10 percent or higher over the years

"We are extremely over-retailed"

- Christopher Zahas
Real Estate Economist and Urban Planner



change of spending habit

online shopping

Big Boxes

Figure 9: collage of different causes of deterioration

The reason for the deterioration of the earlier malls was triggered by many factors. The changing dynamic of the retail environment affected it most such as the rise of the Big boxes, easy online shopping, changing spending habits of the new generations for experiences rather than goods. Last but not least the COVID pandemic that started in 2019 has heavily impacted the physical retail environment due to social distancing that might push the decline to be more severe.

But the main contenders are the big boxes often grouped within the same commercial zone that have one-stop shopping facilities. "Through 1990s Big Boxes "Killed" the older malls." ³



Figure 10: Aerial view of strip shopping centers consisting big boxes

Causes of the Deterioration

URBAN ENVIRONMENT



Figure 12: No pedestrian access along the threshold

- Poorly designed thresholds have no definition of public accessibility.
- Less pedestrian accessibility creates a barrier between surrounding contexts.
- Public access is limited to the automobile, parking and walking to and from the entrance.

LACK OF OUTDOOR PUBLIC ACTIVITY



Figure 13: Abandoned parking lot became an informal place for biking

- No Accessible outdoor public activity amplifies placelessness.
- Lack of integrated public transport accessibility forces the reliability of the automobile.



Figure 11: Aerial view of Northland Center (1954), Detroit, MI

ECOLOGICAL



Figure 14: Asphalt parking lot at Mall of America, MN

- Abandoned asphalt parking is one of the worst contributors to the heat island effect.
- Cause of flash flood & stream contamination
- "When watershed imperviousness exceeds 25%, only hardier reptiles and amphibians can thrive."⁴

ECONOMIC



Figure 15: Traditional Downtown

- Erodes the economic base of any nearer older downtown.
- Building types are not efficient for future adaptive reuse.
- Often the building has very little site design and minimal formal expression which creates cultural ambiguity.

VISUAL



Figure 16: Front perspective of Landmark mall, Alexandria, VA

Site Selection

To look for an abandoned mall site, I have searched the surrounding of my location (Alexandria, VA) and also the web. There is a trending web forum named DEADMALLS.COM, which has ample information, background stories, and updates on the abandoned mall sites, mostly located in the U.S.

The location of the malls is mostly at the outskirts of the nearest cities. These sites are often connected to the city through the state highways which are all high-speed vehicular connections to prioritize the automobiles.

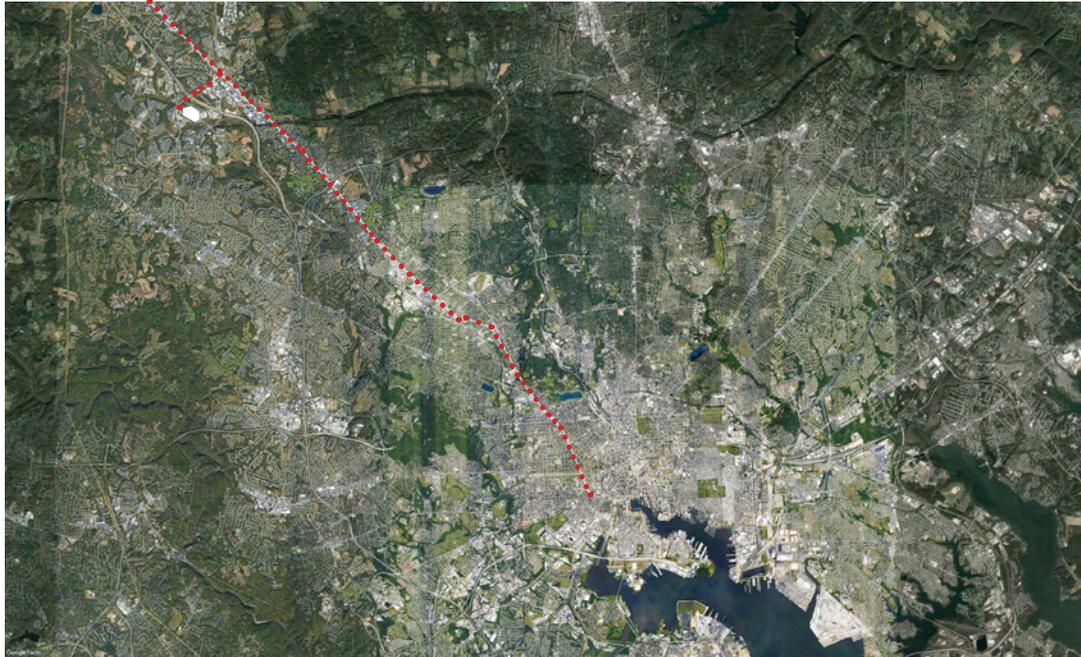


Figure 53

OWING MILLS MALL, Baltimore, MD

-DISTANCE TO THE NEAREST CITY : 12.5 MILES
-CONNECTED THROUGH US-140

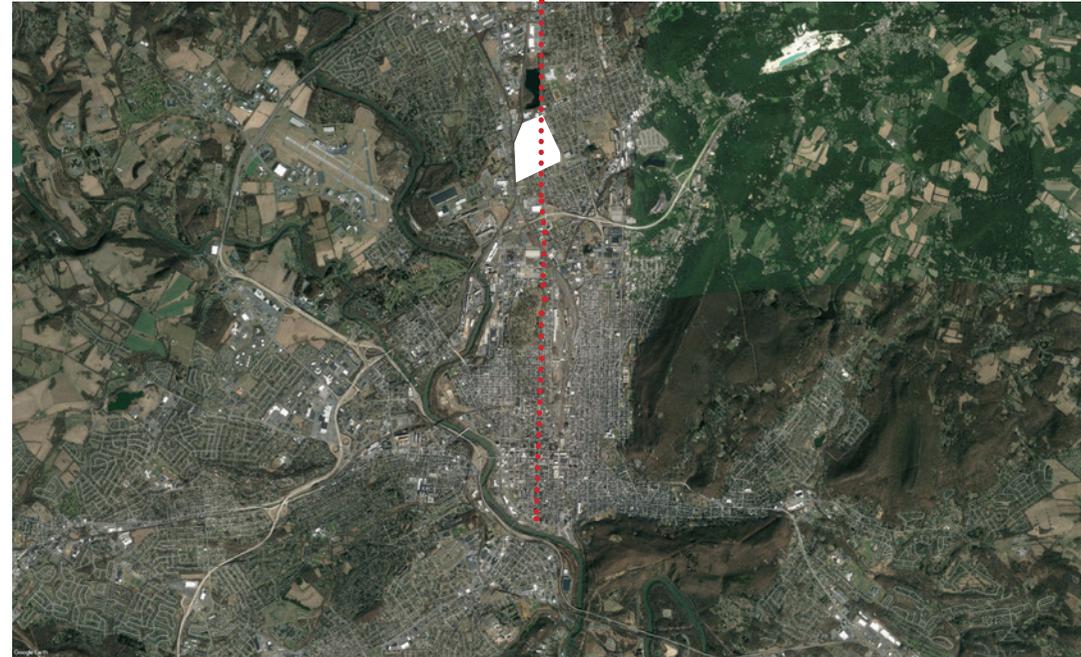


Figure 54

FAIRGROUNDS SQUARE MALL, Berks, PA

-DISTANCE TO THE NEAREST CITY : 3.5 MILES
-CONNECTED THROUGH US 222B

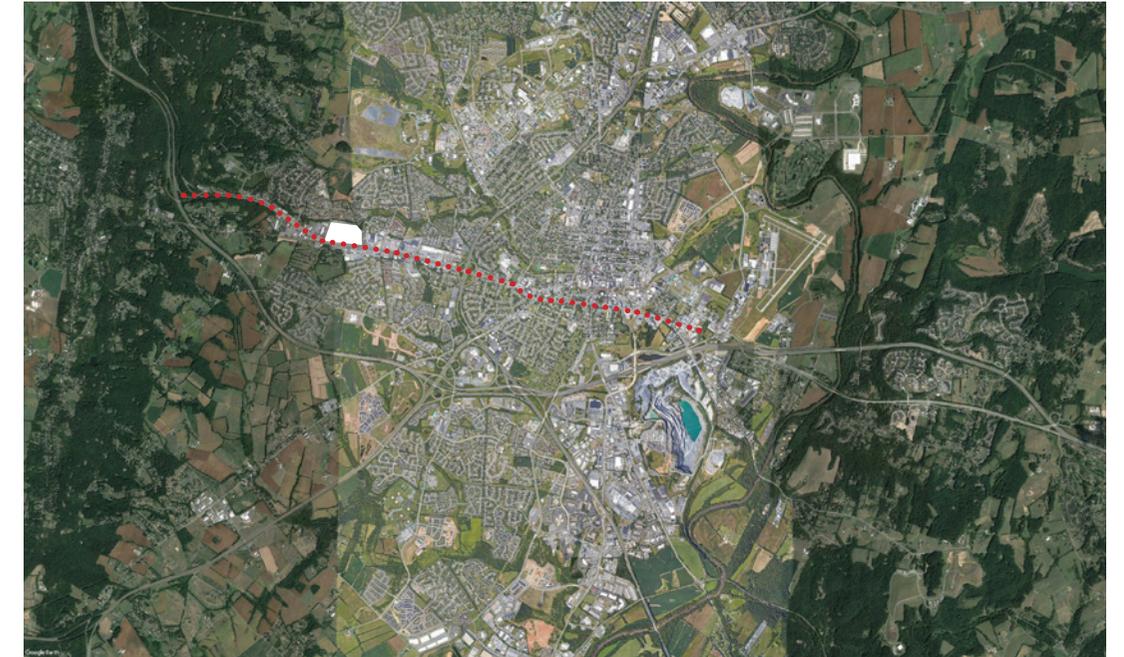


Figure 55

FREDERICK TOWNS MALL, Frederick, MD

-DISTANCE TO THE NEAREST CITY : 2.5 MILES
-CONNECTED THROUGH US 40

Site Selection

For selecting an abandoned mall site, I have given the priorities to the socio-economic conditions of the contexts. Though most of the mixed-use developments occur in a site that has a growing demand from the surrounding neighborhoods with a well-established community, my intention was to explore a site that rather has a declining socio-economic situation. So, among the three candidates I have chosen the Fairgrounds Square mall site that has a per capita income less than the national average and with one of the highest poverty rates though having a glorious past. These declining situations are the main challenges to the thesis.



Figure 17

OWING MILLS MALL, Baltimore, MD

- WRAPPED BY HIGH SPEED VEHICULAR ROAD
- LESS PROXIMITY TO NEARBY SUBURBAN NEIGHBORHOOD
- ISOLATED BEHIND A STRIP DEVELOPMENT
- PER CAPITA INCOME \$27,107



Figure 18

FAIRGROUNDS SQUARE MALL, Berks, PA

- STRIP DEVELOPMENT
- CLOSE **PROXIMITY TO THE NEIGHBORHOODS**
- SCOPE FOR **MULTIPLE MODES OF TRANSPORT**
- PROXIMITY TO **NATURAL ELEMENTS** (ABANDONED QUARRY)
- PER CAPITA INCOME **\$21,624**
- DECLINING SOCIO-CULTURAL CONTEXT



Figure 19

FREDERICK TOWNS MALL, Frederick, MD

- STRIP DEVELOPMENT
- CLOSE PROXIMITY TO THE NEIGHBORHOODS
- LESS MODE OF TRANSPORT
- PROXIMITY TO NATURAL ELEMENTS
- PER CAPITA INCOME \$31,123

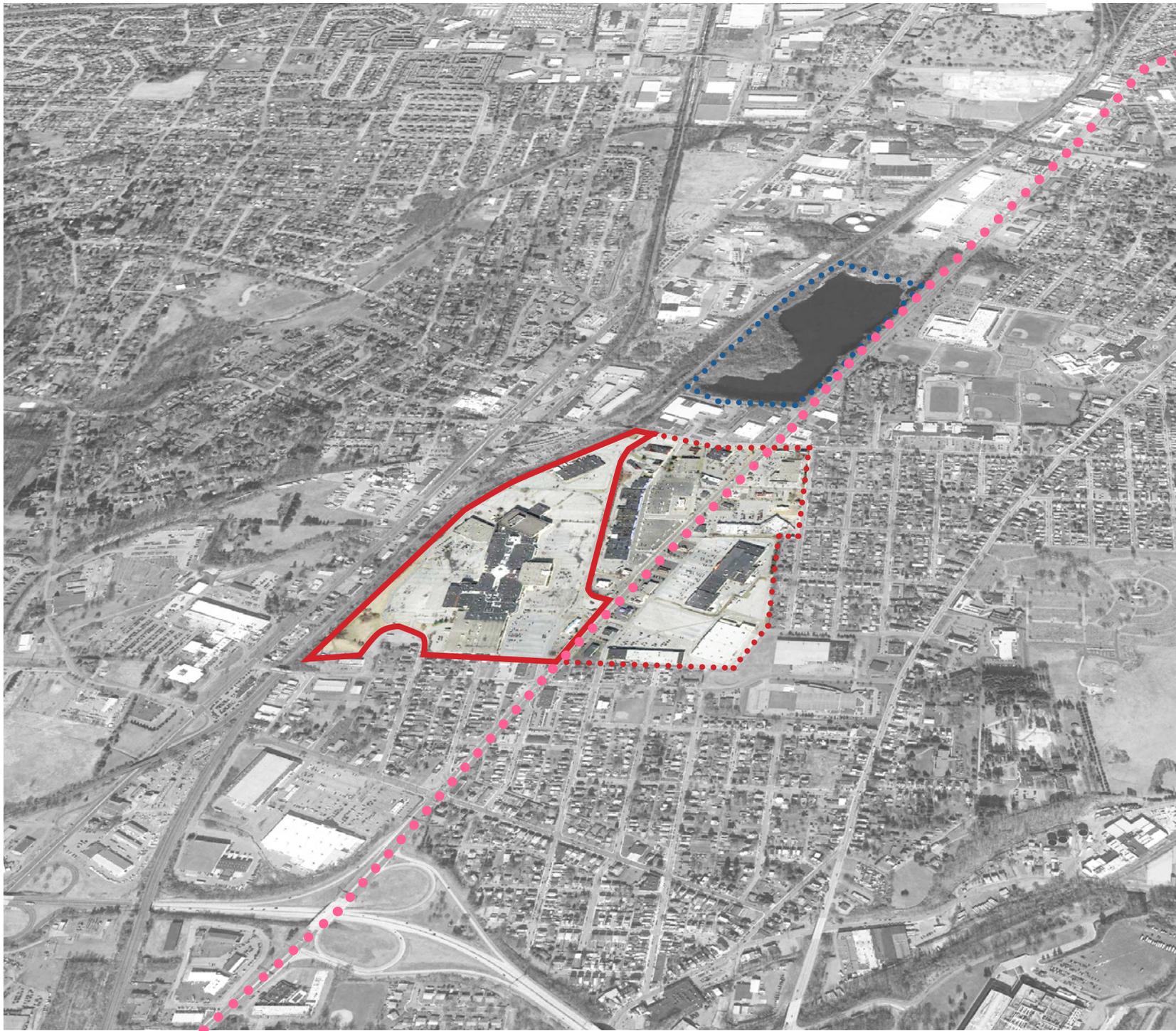


Figure 20: Aerial view of Fairgrounds Square mall area.

The Site

Fairgrounds Square Mall
 Muhlenberg Township, Reading, PA
 Site area: 66 Acre
 Area Population_20,345
 distance from Reading: 3.5 miles

The Fairground Square Mall site is situated in the Muhlenberg Township, the outskirts of the city of Reading, makes it a suburb of Reading. The working demography who lives here usually work in the city and commute. The site is part of a strip development that is mostly commercial that guides to the entrance of the city. As per zoning, it is considered commercial land use. Along with the abandoned mall, there are other shopping centers and plazas populating the commercial environment. The site is heavily surrounded by residential neighborhoods and some industrial land uses on the west. The **US 222B** is the major highway that connects the site to the city. **An abandoned quarry** is situated at the north of the site which is a major natural element within the context.



Figure 21

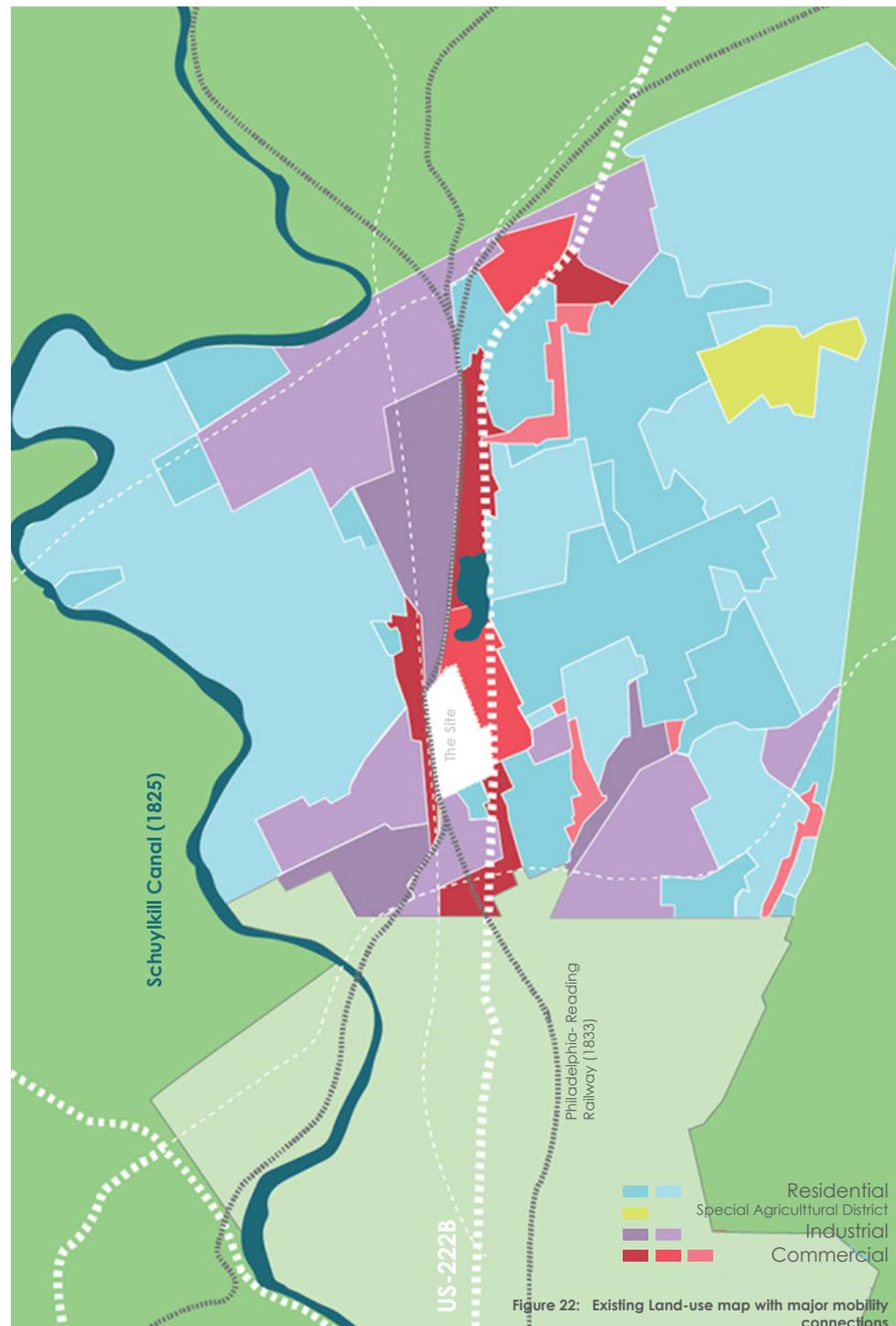


Figure 22: Existing Land-use map with major mobility connections

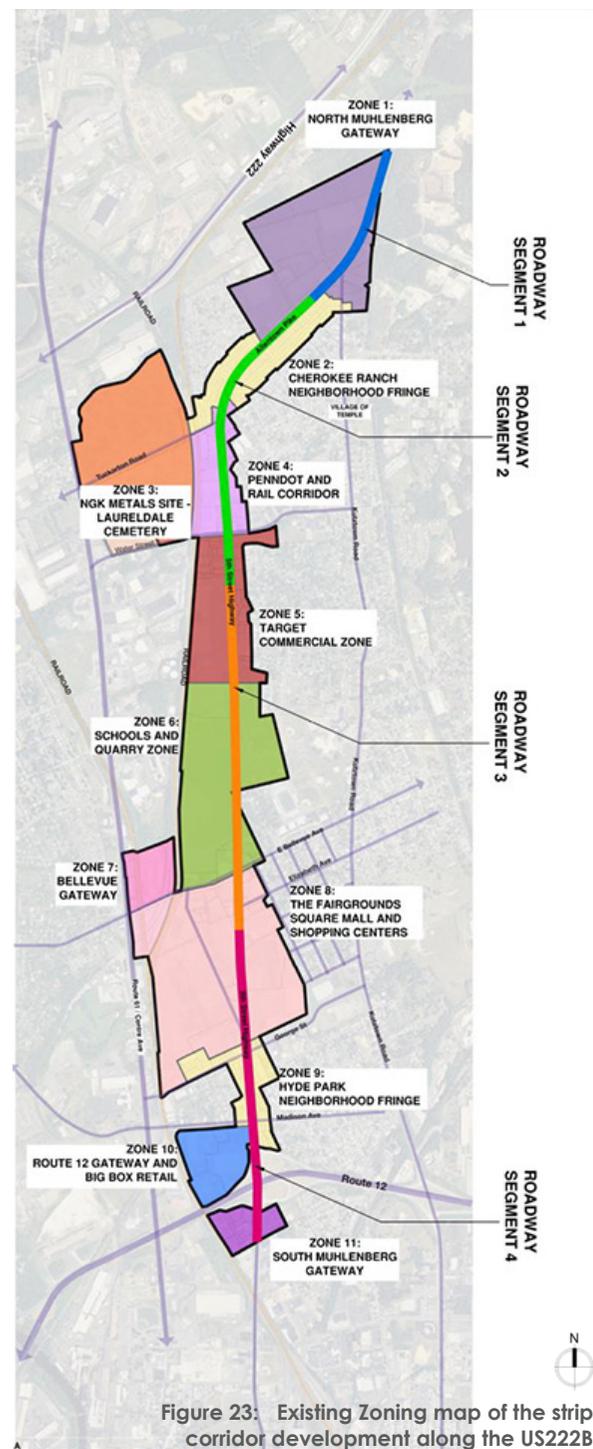
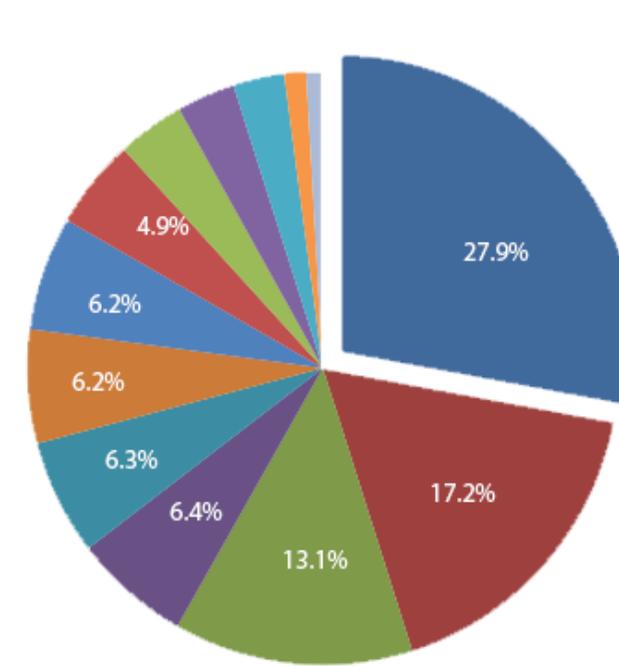


Figure 23: Existing Zoning map of the strip corridor development along the US222B



Manufacturing
 Educational, health, social service
 Retail trade
 Arts, entertainment, recreation, accommodations, food service
 Finance, insurance, real estate
 Transportation, warehousing
 Professional, administrative, scientific, management
 Construction
 Other services
 Wholesale trade
 Public administration
 Information
 Agriculture, forestry, fishing, hunting and mining

Figure 24: Muhlenberg Township civilian Labor Force Composition, 2000

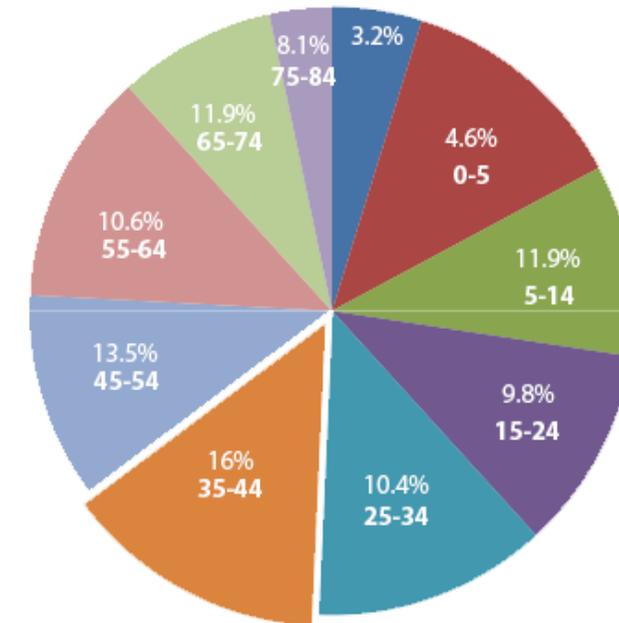


Figure 25: Demographic Profile according to age

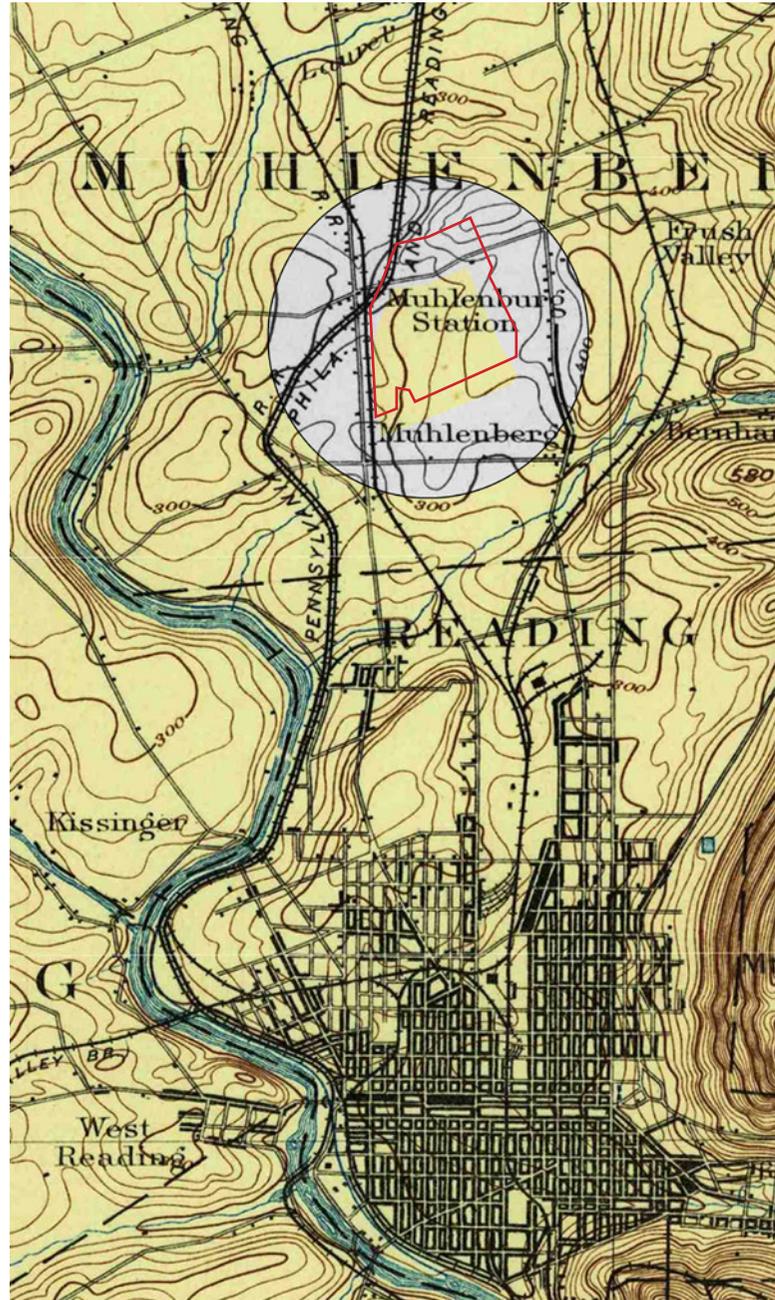


Figure 26: City map dated to 1894

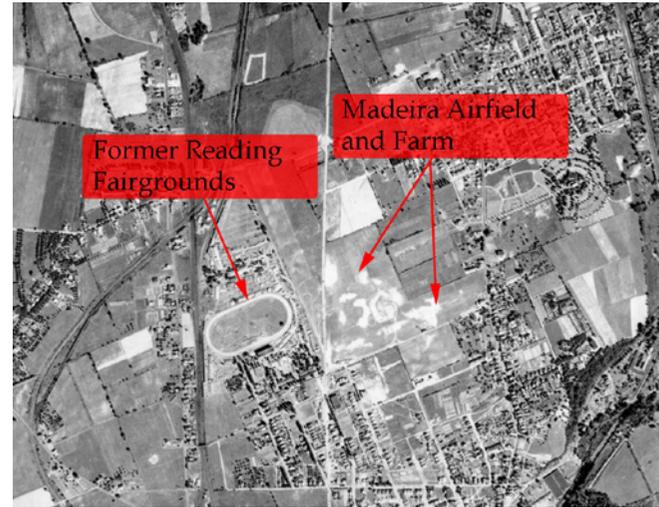


Figure27: The Fairground Speedway, satellite view, 20th century



Figure28: The Fairground Speedway, satellite view, 20th century



Figure29: Horse racing in 19th century



Figure30: Motor car race track in 20th century

The City of Reading

The city of Reading has an industrial past for being a top producer of iron in the 18th century. Throughout the early 20th century it has been renowned for its small manufacturing industries, the Schuylk Canal (1825) and the Philadelphia-Reading railroad (1833) for the cheap transportation of goods. The city itself was one of the top urban centers in the 19th century.



Figure31: Schuylk Canal



Figure32: The City of Reading, 1930



Figure33: Railway Junctions in the city



Figure34: A pair of Reading F7A

The Fairground Square

The name "Fairground" came from the functions of the site that had been hosted. The site was a platform for an annual fair and a racetrack in the 19th century. At first, the track arranged horse races which promoted motor car races for amusements. The site has a history of being a recreational destination for industrial workers from the city.

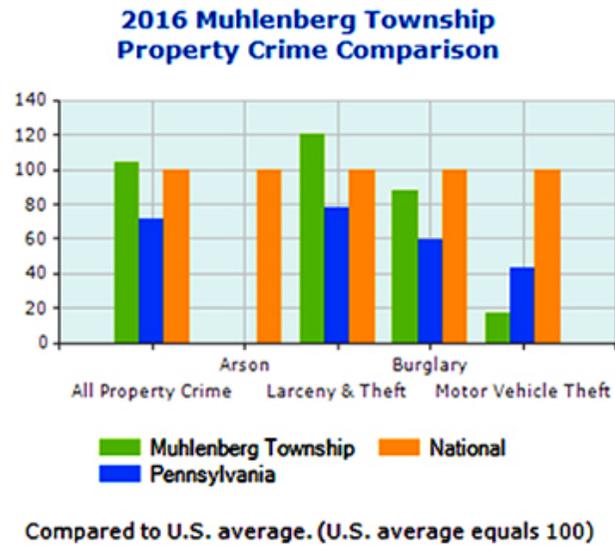


Figure 35: Property crime comparison

Published: September 26, 2011
 Cities With the Highest Poverty Rates in 2010
 Related Article >

CITY	POPULATION	PCT. IN POVERTY	CHANGE FROM 2007
Reading, Pa.	88,175	41.3%	+6.8
Flint, Mich.	102,231	41.2	+5.6
Bloomington, Ind.	81,096	39.9	-1.7
Albany, Ga.	78,971	39.9	+12.2
Kalamazoo, Mich.	74,382	38.8	+3.3
Brownsville, Tex.	175,831	38.6	+2.1
Gary, Ind.	80,840	38.3	+6.7
Detroit, Mich.	711,910	37.6	+3.8
College Station, Tex.	94,246	37.3	+5.8
Pharr, Tex.	70,888	37.1	

Send Feedback
 Sources: Andrew A. Beveridge, Queens College Sociology Department; Census Bureau

Figure 36: Poverty data



Figure 37: Redevelopment proposal by the mall owner



Figure 38: Mall being demolished, 2020



Figure 39: Proposed Comprehensive plan by the Township, 2003

- RECOMMENDATION A: QUARRY LAKE NATURE CENTER
- RECOMMENDATION B: UNIQUE PRETZEL FACTORY EXPANSION
- RECOMMENDATION C: PROFESSIONAL/MEDICAL OFFICES
- OPTIONAL RECOMMENDATION D: OPTIONAL FUTURE QUARRY LAKE HOSPITALITY CENTER
- RECOMMENDATION E: 5TH STREET HIGHWAY AND BELLEVUE AVENUE GATEWAY RETAIL CENTER
- RECOMMENDATION F: ELIZABETH AVENUE EXTENSION AND RETAIL
- RECOMMENDATION G: MCDONALD'S RESTAURANT REDEVELOPMENT
- RECOMMENDATION H: PLAZA 222 CINEMA REDEVELOPMENT
- RECOMMENDATION I: FARMER'S MARKET FOCUSED RETAIL VILLAGE
- RECOMMENDATIONS J & L: MUHLENBERG TOWN CENTER I & II - ALTERNATE LAYOUT & MIX
- RECOMMENDATION K: MALL ENTRY EXTERIOR RESTAURANTS & STORES - A NEW FACE FOR THE FAIRGROUNDS MALL
- RECOMMENDATION M: POTENTIAL "FAIRGROUNDS PLACE" INFILL LIFESTYLE RETAIL/ MIXED-USE CENTER
- RECOMMENDATION N: 5 TH STREET HIGHWAY & GEORGE STREET INTERSECTION IMPROVEMENTS AND RETAIL
- RECOMMENDATION O: MUHLENBERG TOWNSHIP CAMPUS
- RECOMMENDATION P: MUHLENBERG TOWN CENTER GATEWAY PARK
- RECOMMENDATION Q: RESTAURANT SITES REDEVELOPMENT
- RECOMMENDATION R: MADISON AVENUE GATEWAY - INFILL RETAIL RESTAURANTS

The Decline

The decline of the economy was caused by the departure of some major manufacturing industries in the city. Some primary employers as Agere Systems, NGK Metals, and Carpenter Technology have terminated a significant number of employees. The common reasons for the declination are shut down of the Philadelphia-Reading railways, adapting new automated technologies, and outsourcing of manufacturing goods. The city faced a steep decline in the economy from the 1970s. The current statistics show that the city has a high theft rate and a poverty rate. The decline impacted negatively the retail market that forced it to shut down the Fairgrounds shopping Mall.

The township has prepared a comprehensive plan in 2003 (figure 39), which indicates an ambition to develop the area into a new town center, promoting pedestrian accessibility and connectivity, though most of the land uses were indicated to be mixed-use focusing mostly on retail functions. But with the declining economic condition over time, this comprehensive plan was never realized with low demand in retail businesses.



Image 40: Bridge connection over the Philadelphia-Reading Railway



Image 41: Existing Framer's Market



Image 42: Looking along the mall's frontages



Image 43: Looking from the south western entrance



Image 44: The threshold between mall and the neighborhood on the east



Image 45: Entrance to the Maderia plaza from US 222B



Image 46: Existing road condition



Image 47: Looking along the US 222B

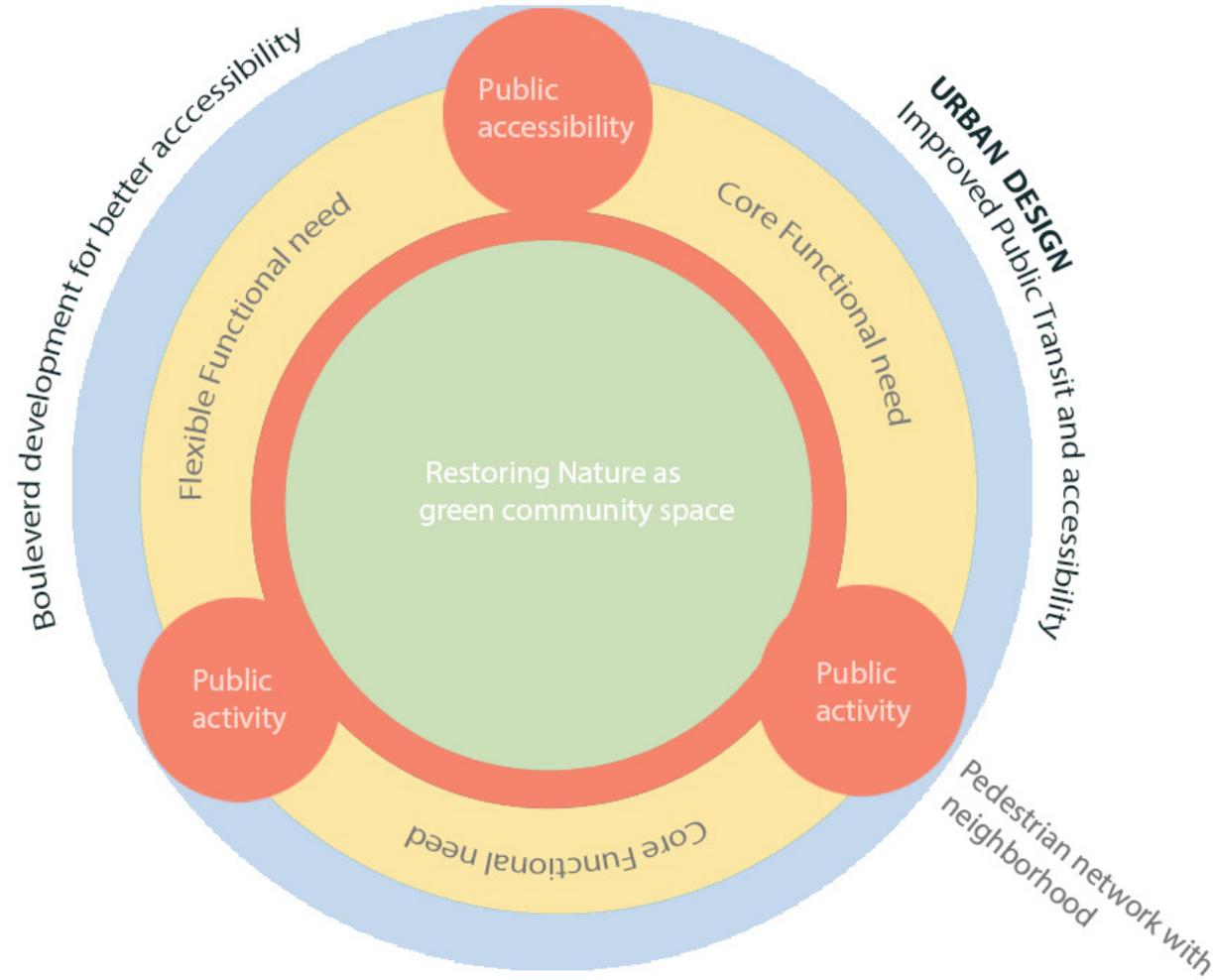


Image 48: Empty parking lot at Plaza 222



Image 49: Neighborhood household in the north-west Muhlenberg

PROPOSED MASTER PLAN



Challenges:

- Improving connectivity within the area and with the surroundings
- Creating a walkable environment and introducing a sense of place.
- Defining flexible and fixed urban elements.
- Introducing natural features within the hardscape.
- Tackling the economic decline and unemployment problem
- Tackling socio-cultural decline, empowering the youth to reduce crime
- Strengthening the sense of community
- Removal of the unnecessary asphalt surfaces (depaving) through community engagement.

Fixed Urban Elements

- Street Connectivity
- Walkable and Public transport friendly street.
- Ecological Revitalization
- Community Development
- Social Amenities

Flexible Urban Elements

- Retail and recreation demand
- Adaptive reuse of the existing buildings
- Housing Demand

For the proposed master plan I have prioritized the fundamental aspects of a good urban design as in better connectivity and walkability with integrated public transport, reclamation of the lost green surfaces to reduce negative environmental impact and creation of public places and activity nodes.

The featured elements are segmented into two major criteria. First, fixed urban elements which will improve the urban environment and accessibility into the the site from the neighborhoods. Those are the durable and essential elements of needs developed by public financing. And the flexible urban elements, which are the provision of flexible land uses that would be developed over time as per need mostly with private investment.

Moreover, because of the unstable socio-economic situation of the township area, future growth is highly unpredictable. In that case, I have proposed an interim state master plan that will focus on creating eco-friendly and green public recreational places which will also contribute to creating a sustainable urban environment.

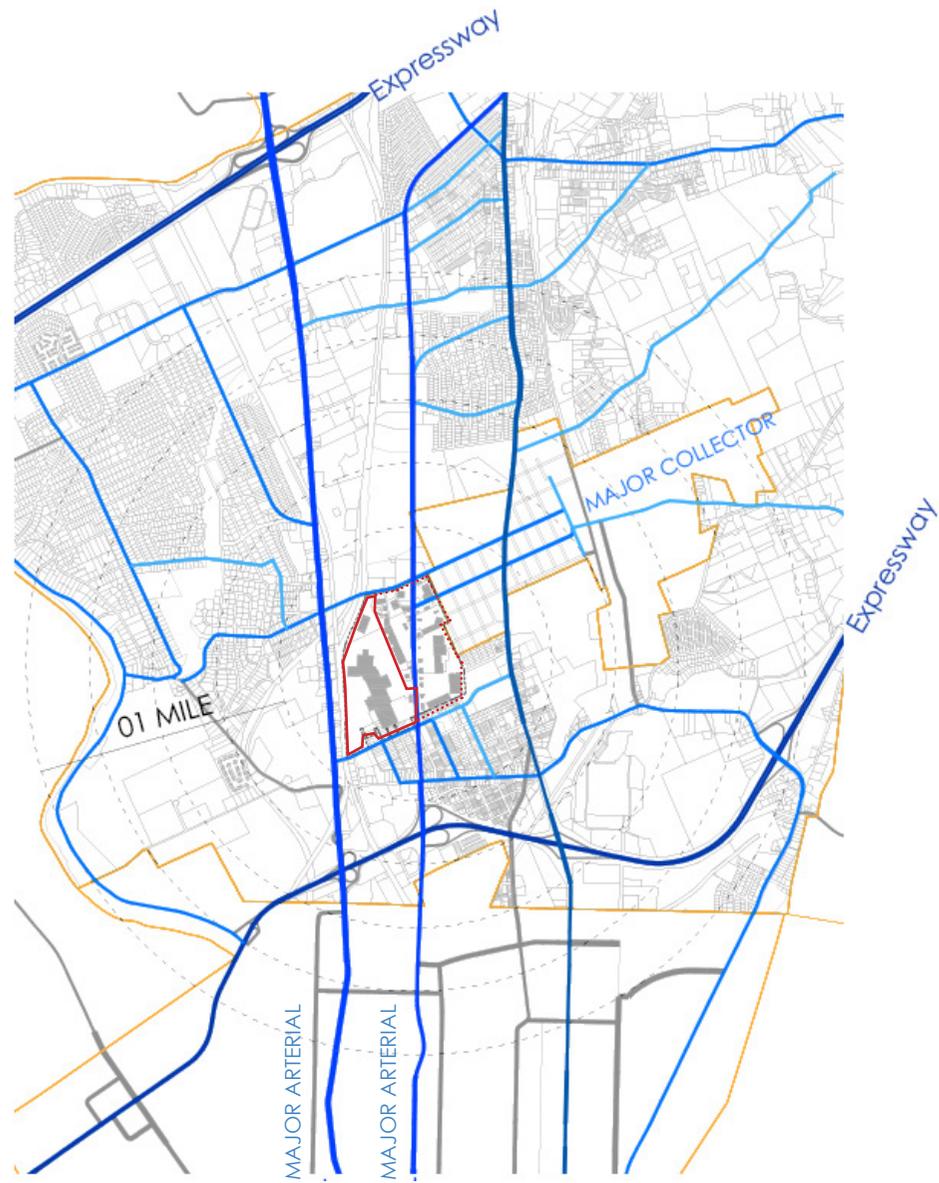
Precedent



Figure 50: Proposed Cottonwood mall redevelopment, Aerial view



Figure 51: Proposed Cottonwood mall redevelopment, Holladay, Utah by Andres Duany and Plater-zyberk



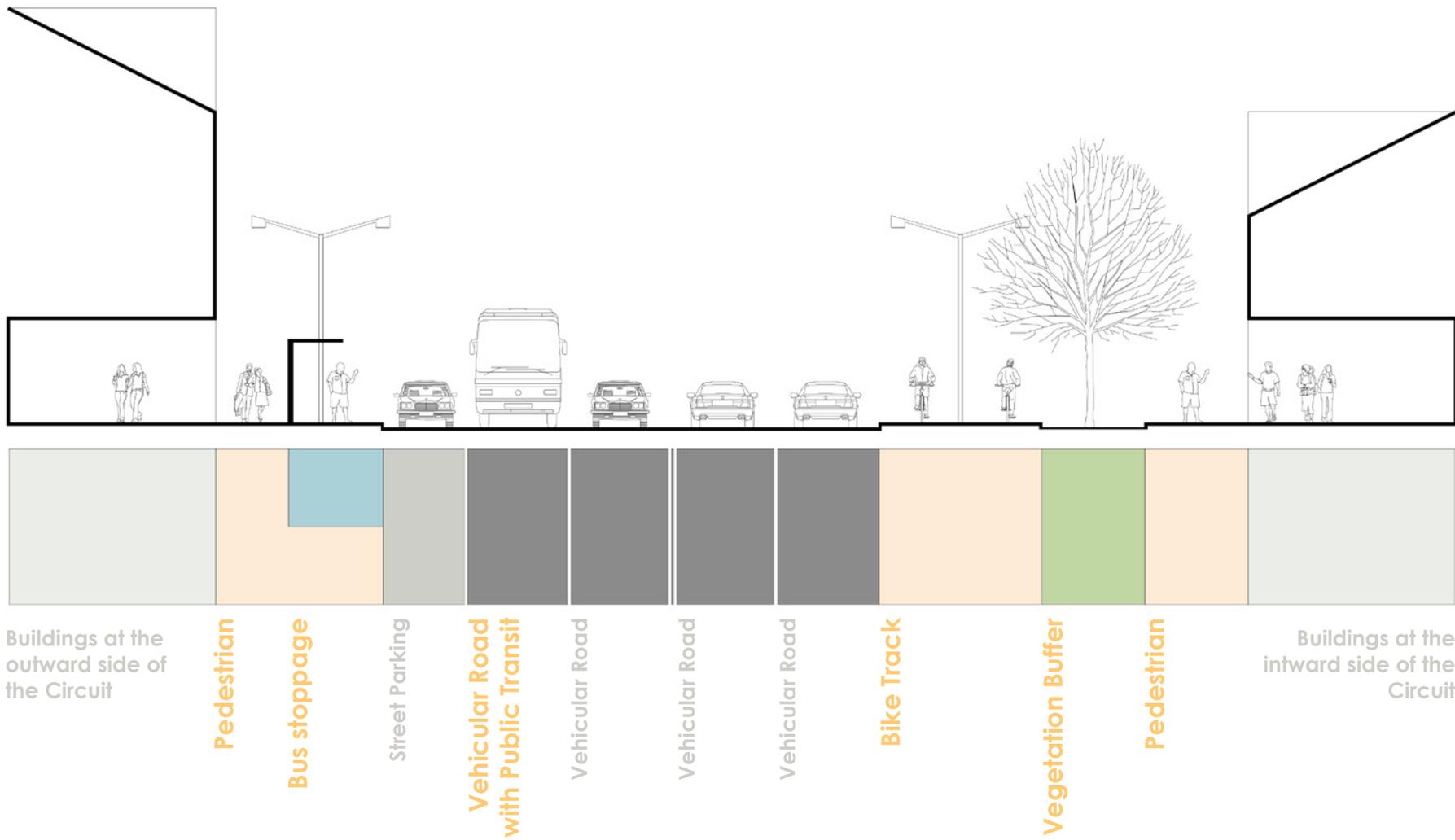
Existing vehicular connectivity



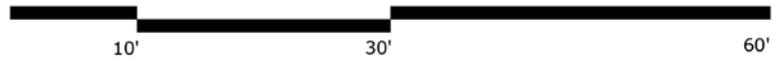
Potential connections in reference with the existing neighborhood streets



Considering existing revenue-generating anchors and integrating the existing connecting roads within the site.



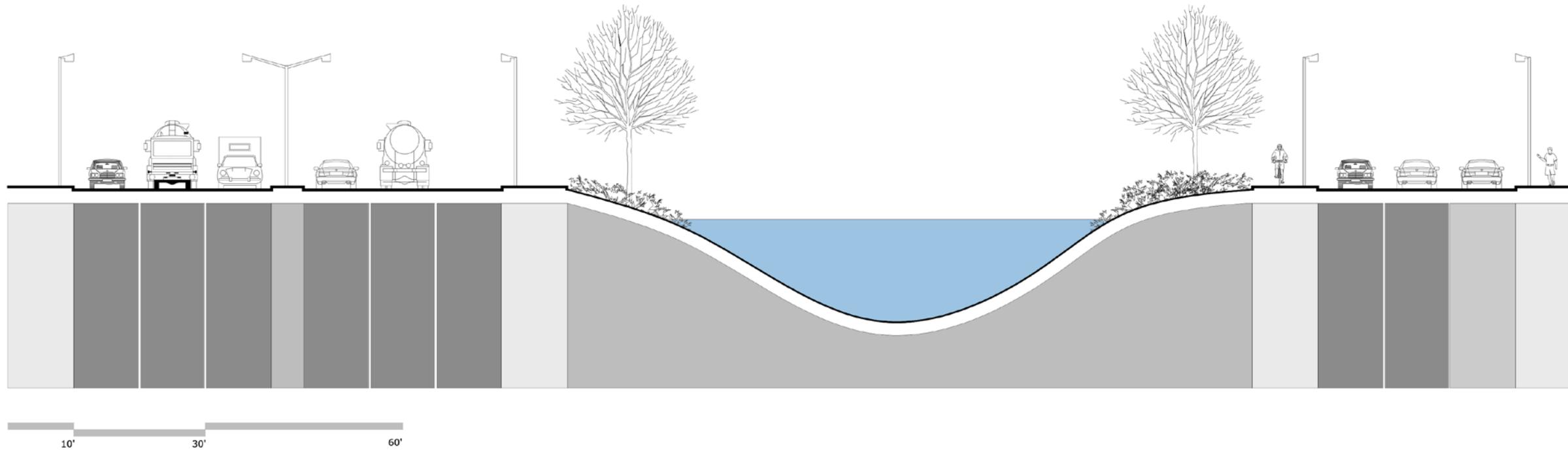
Typical section of the proposed circuit road
 All modes of mobility, featuring wide pedestrian sidewalks and integrated public transit.



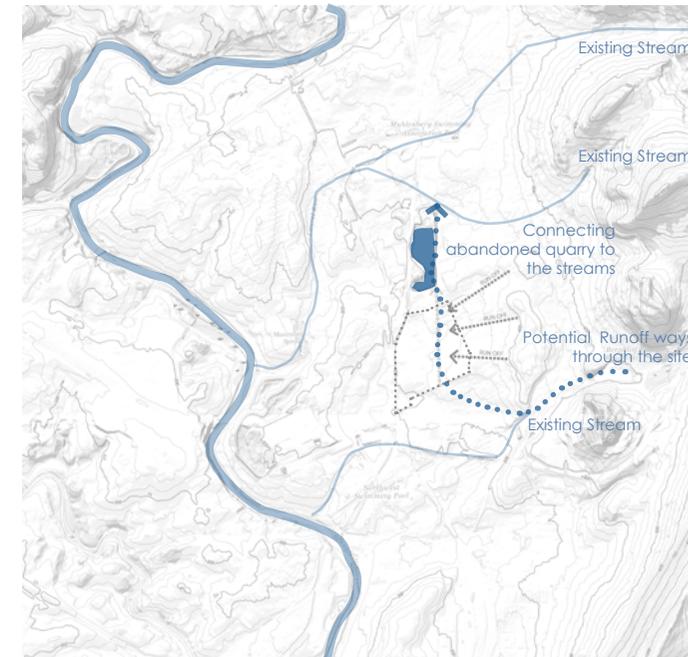
Street facades



Fixed Urban Elements
 Improving connectivity



The site is situated at the valley of some high terrains on the eastern side. To drain out the stormwater run-offs an integrated stormwater drainage system is proposed which will act as a buffer between the highway and the internal areas, improve the ecological balance providing water as a part of the ecosystem and improve the scenic experiences within the site.



Fixed Urban Elements
Improving Natural Balance

Instant cities and suburban retrofits are not core cities. They are urban nodes within a new polycentric metropolis that simultaneously complement the core city's downtown and serve a predominantly suburban population. They are hybrids and reflect aspects of both centerness and decentralization.

- Ellen Dunham-Jones & June Williamson,
Retrofitting Suburbia, : Urban Design Solutions for Redesigning Suburbs

The proposed end-state master plan will be the newly defined center of growth to the township and the city, integrating the public transit, vehicular movements, and pedestrian movement and allowing the mixed-used developments.



Fixed Urban Elements



Proposed Master Plan- End state

Four nodes have been designated for different zoning based on the proximity of neighboring land uses such as the industrial node is closer to the city entrance to allow better interaction with the city, the social service node is closer to the neighborhood to give quicker access to the amenities and the transportation node is adjacent to the former railway in pursuit to create a multimodal connection with the city.

TRANSPORTATION HUB & FARMERS MARKET

INDUSTRIAL BUSINESS & GROWTH

- MIXED USED OFFICE
- BUSINESS INCUBATOR
- NEW EMPLOYMENT SECTOR
- FUTURE ADAPTIVE REUSE OF BIG BOXES

RETAIL & RECREATION

SOCIAL SERVICES

- HEALTHCARE MALL
- ADAPTIVE REUSE
- TECHNICAL INSTITUTE



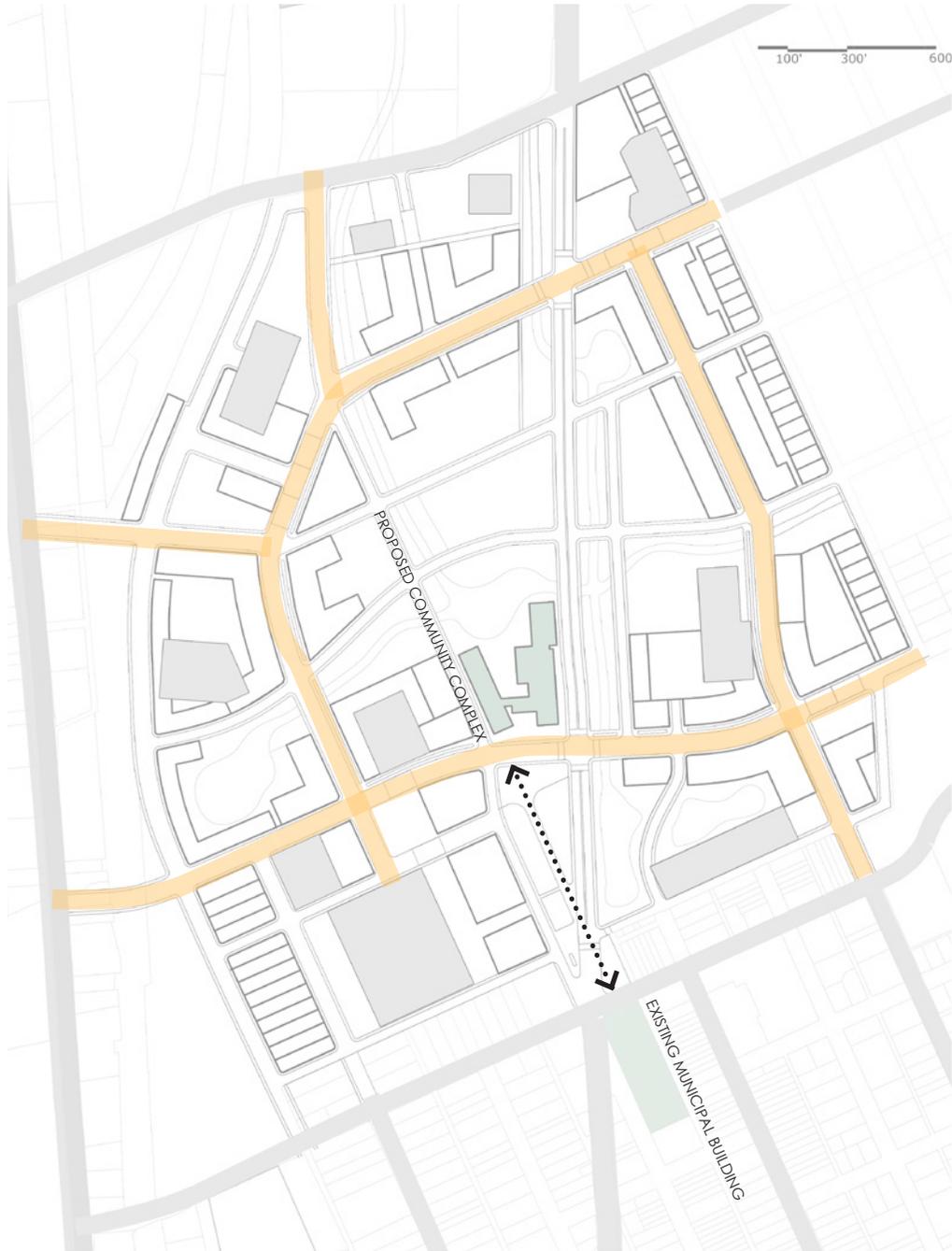
Flexible Urban Elements
Flexible growth at the nodes as per need

An interim phase master plan is proposed focusing on creating green urban public places to reclaim the natural environment. The unpredictability of the future economy of this area might not turn out as the end state master plan is anticipated. In that case, this interim state will allow to add values to the site and attract more investors.

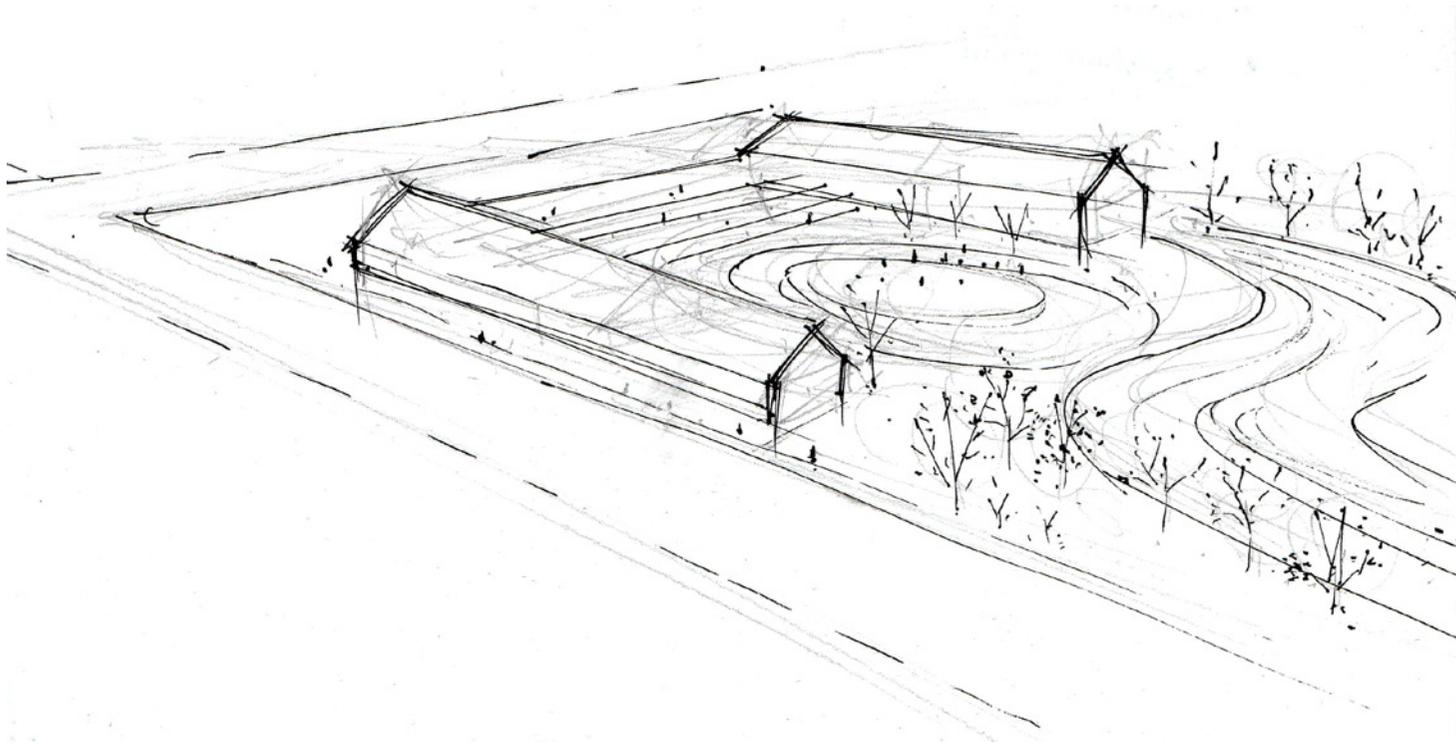
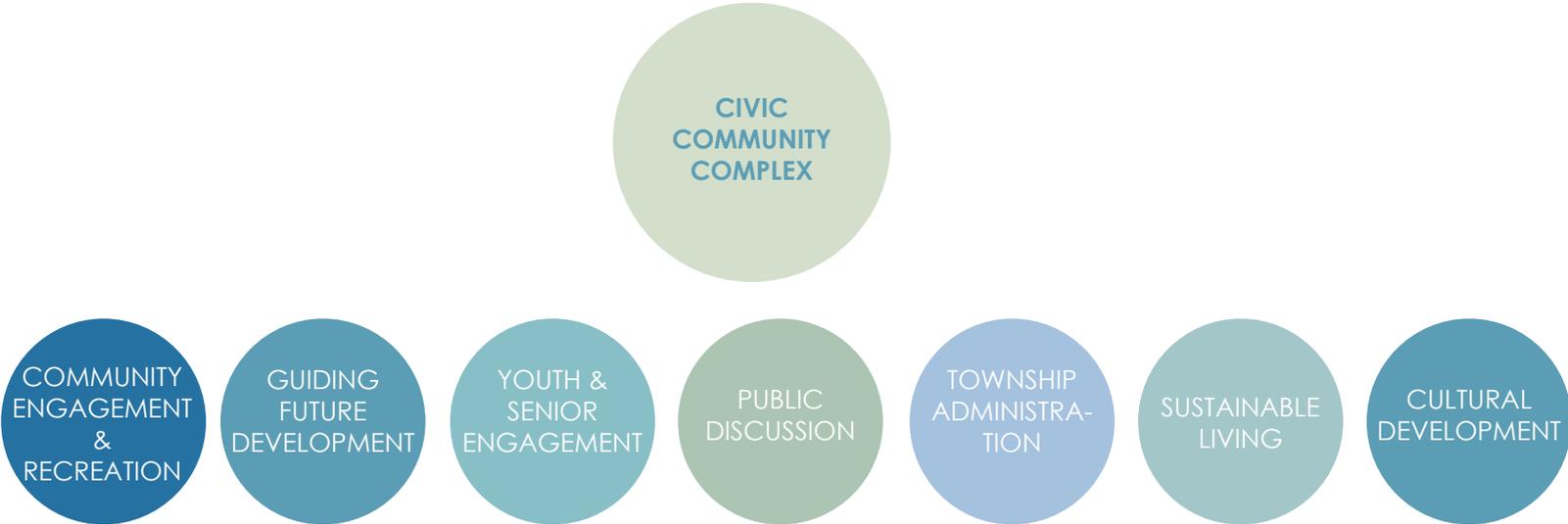


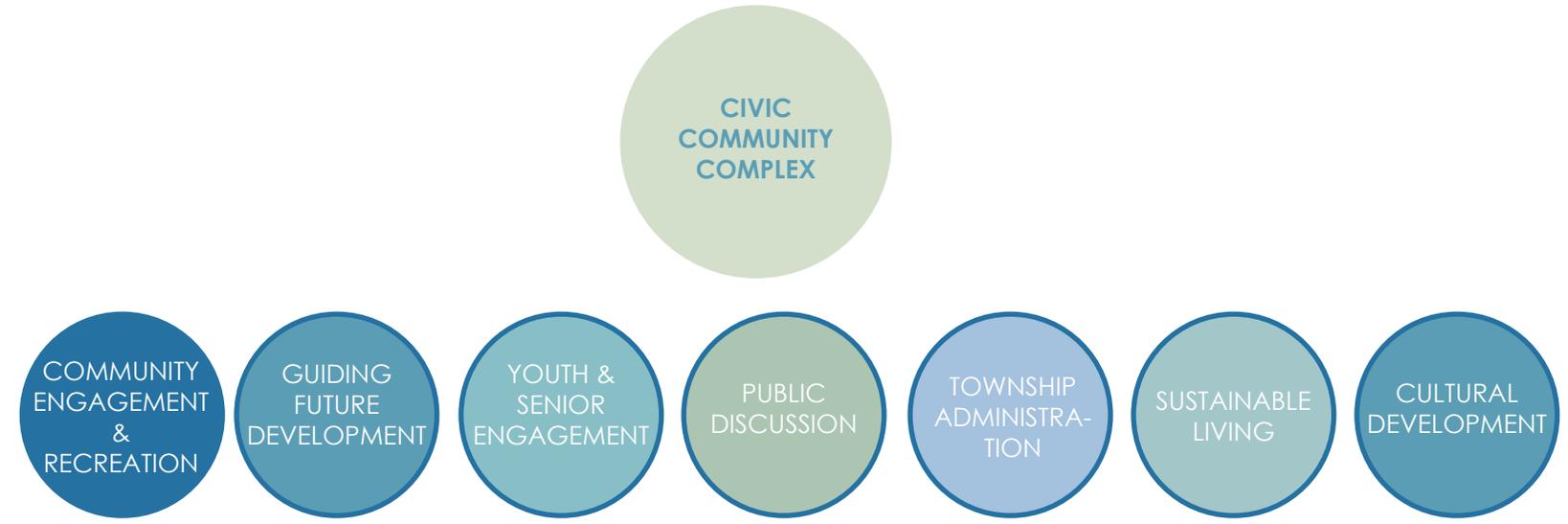
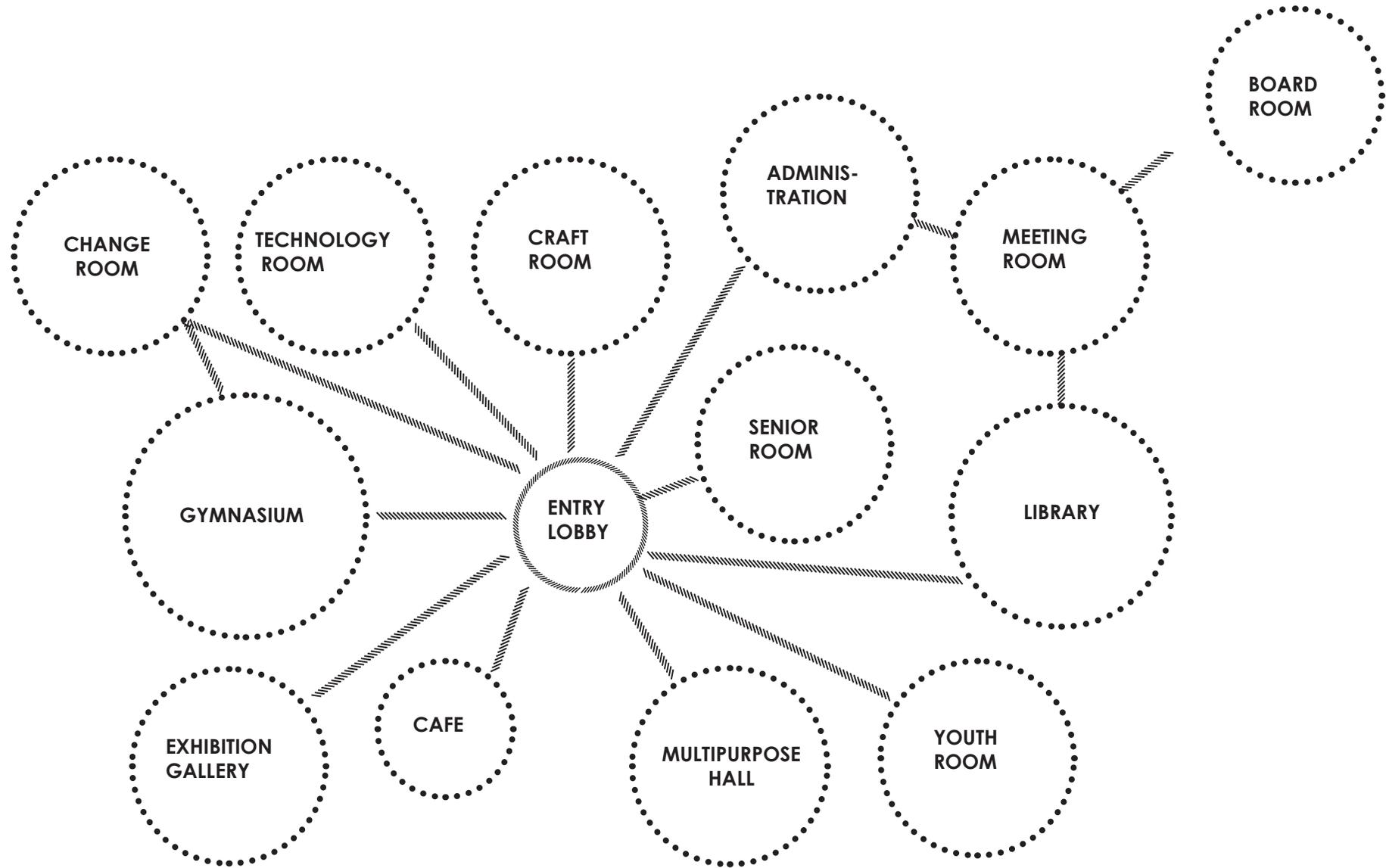
INTERIM PHASE MASTER PLAN

THE PROJECT_CIVIC COMMUNITY COMPLEX



The development of the master plan is a long time process. To guide the master plan development the existing community needs to be educated, informed, and engaged throughout the process. For the purpose of governing the development by the people and the administration together the civic community center is proposed which will be a microcosm of the future development demonstrating the ways of sustainable living. It will be a place for discussions, decisions, demonstrations, exhibitions, and recreations to the community people. The center will provide skill-training opportunities through arranging workshops on cutting edge technologies and entrepreneurship, thus contribute to the economic growth of the community. The project will also contribute to the cultural development of the community. The site that has been chosen for the project is closer to the existing municipal building for better accessibility between the community and the township.





- LIBRARY
- GYMNASIUM
- URBAN FARMING
- EXHIBITION GALLERY
- YOUTH ROOM
- SENIOR ROOM
- LOUNGE FOR ALL AGES
- TECH ROOM
- PRE SCHOOL ROOM
- MEETING ROOM
- MULTIPURPOSEHALL
- ADMINISTRATIVE OFFICE
- MEETING ROOM
- BOARD ROOM
- RAIN WATER HARVESTING
- COUNSELING ROOM
- CRAFT ROOM
- TRAINING KITCHEN



Trinity Lutheran Church, 1791



Reading Hardware Company



Grimshaw Silk Mill



Liberty Fire Company No. 5



Reading City Hall



Keystone Hook and Ladder Company



Bethel A.M.E. Church, 1837



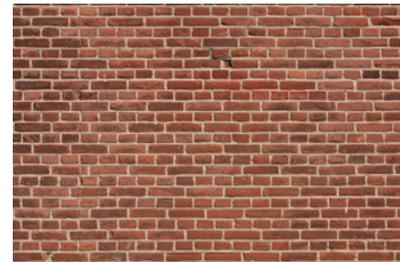
Cotton and Maple Streets School, 1902-03



Reading Hardware Butt Works



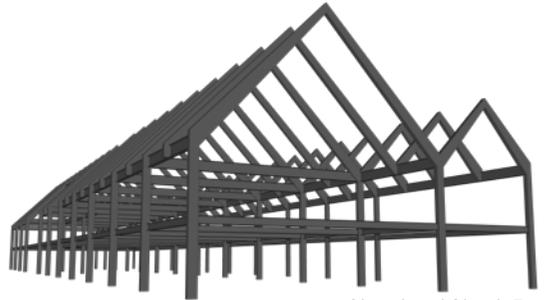
Gabled roof form
Recognizable to the community as a landmark



Brick Texture

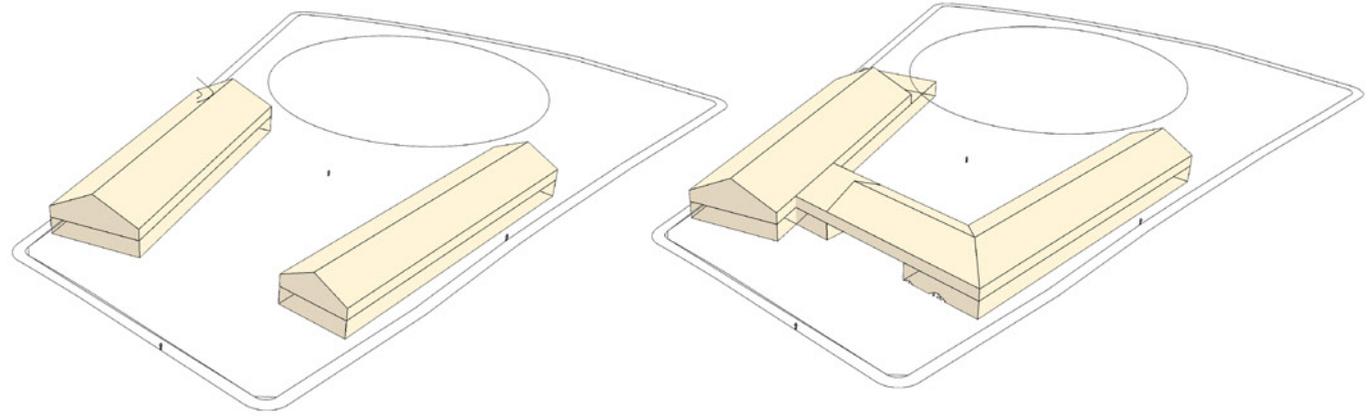


Figure 56: Precedents of inspiration.
Vertical elements as shading device and openings

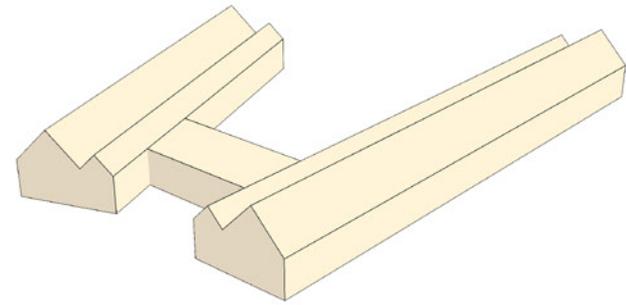


Structural Steel Frame
Available from the local industries

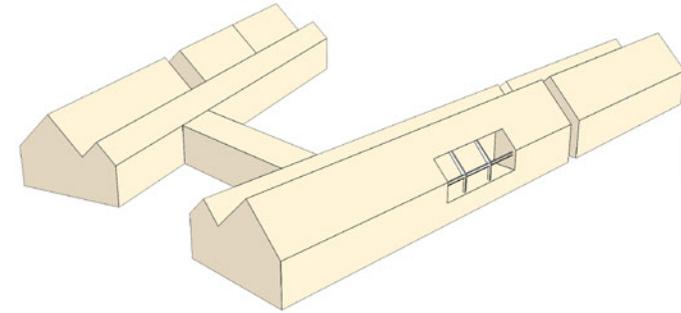
Figure 52: Historic Landmarks of Reading, PA



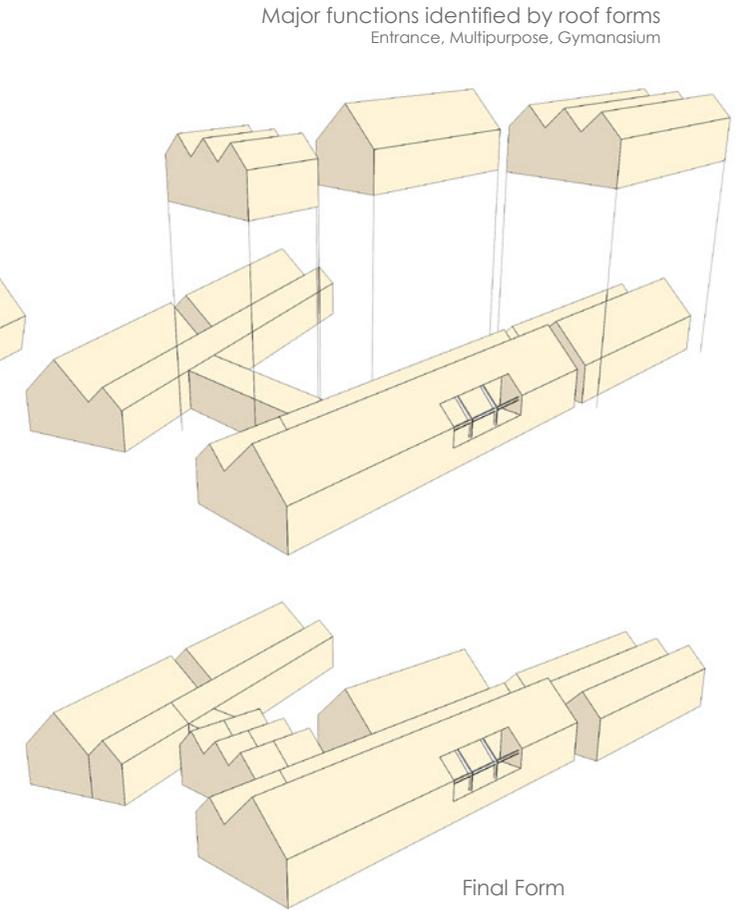
Major functions aligned with the streets



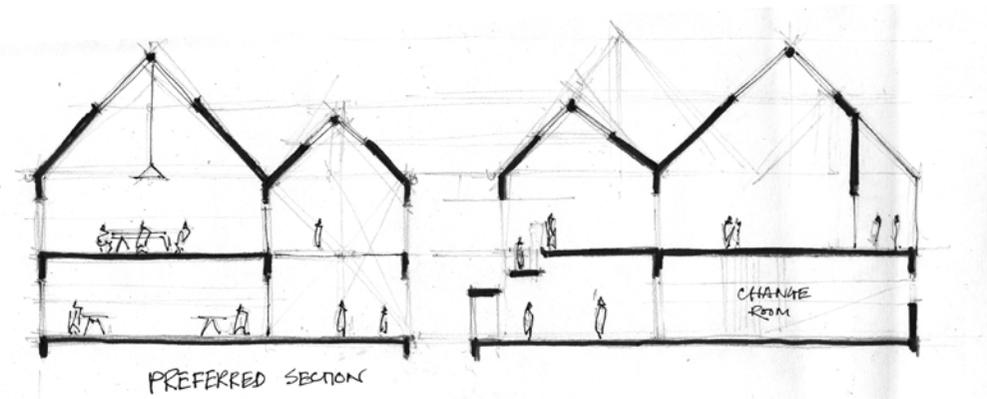
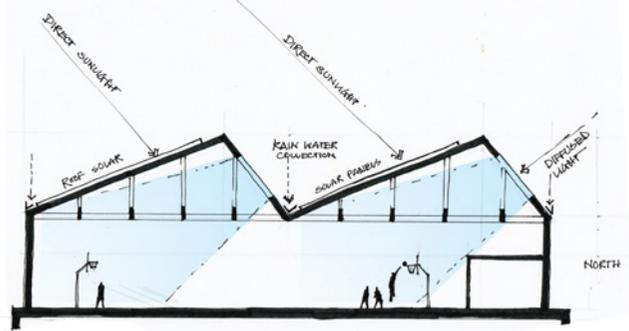
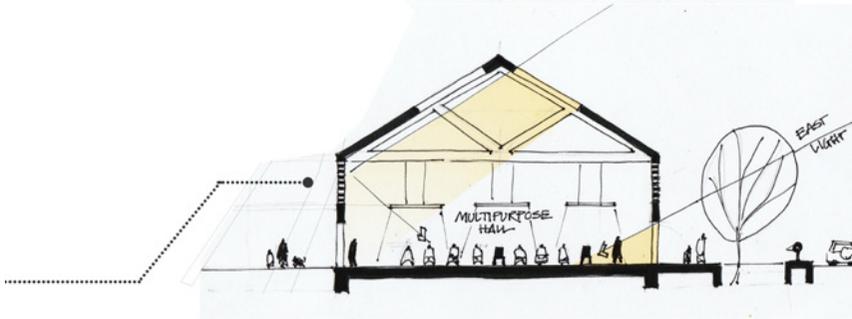
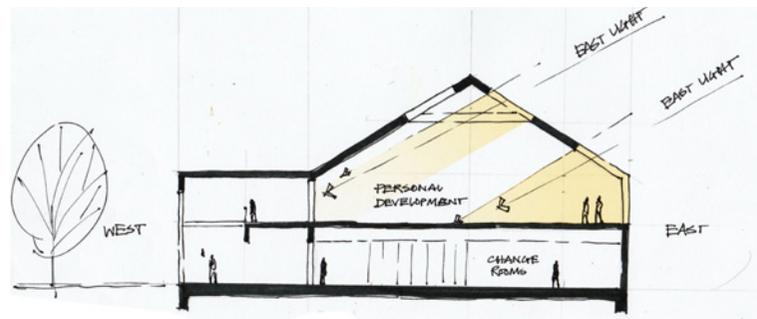
Defined form and proportion



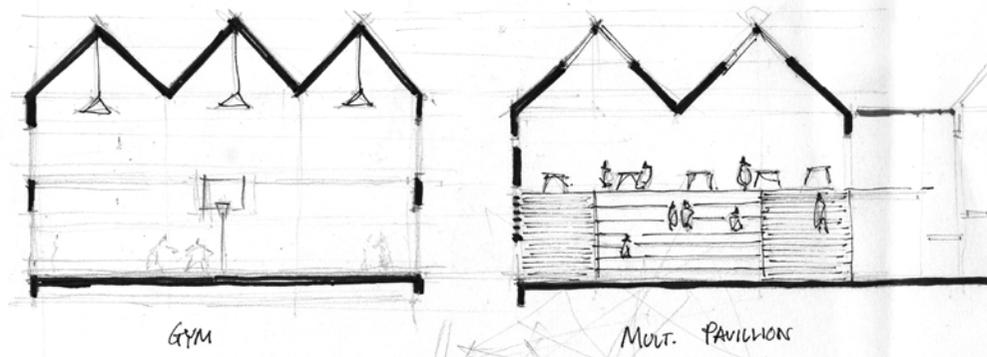
Defined form as per programs



Final Form

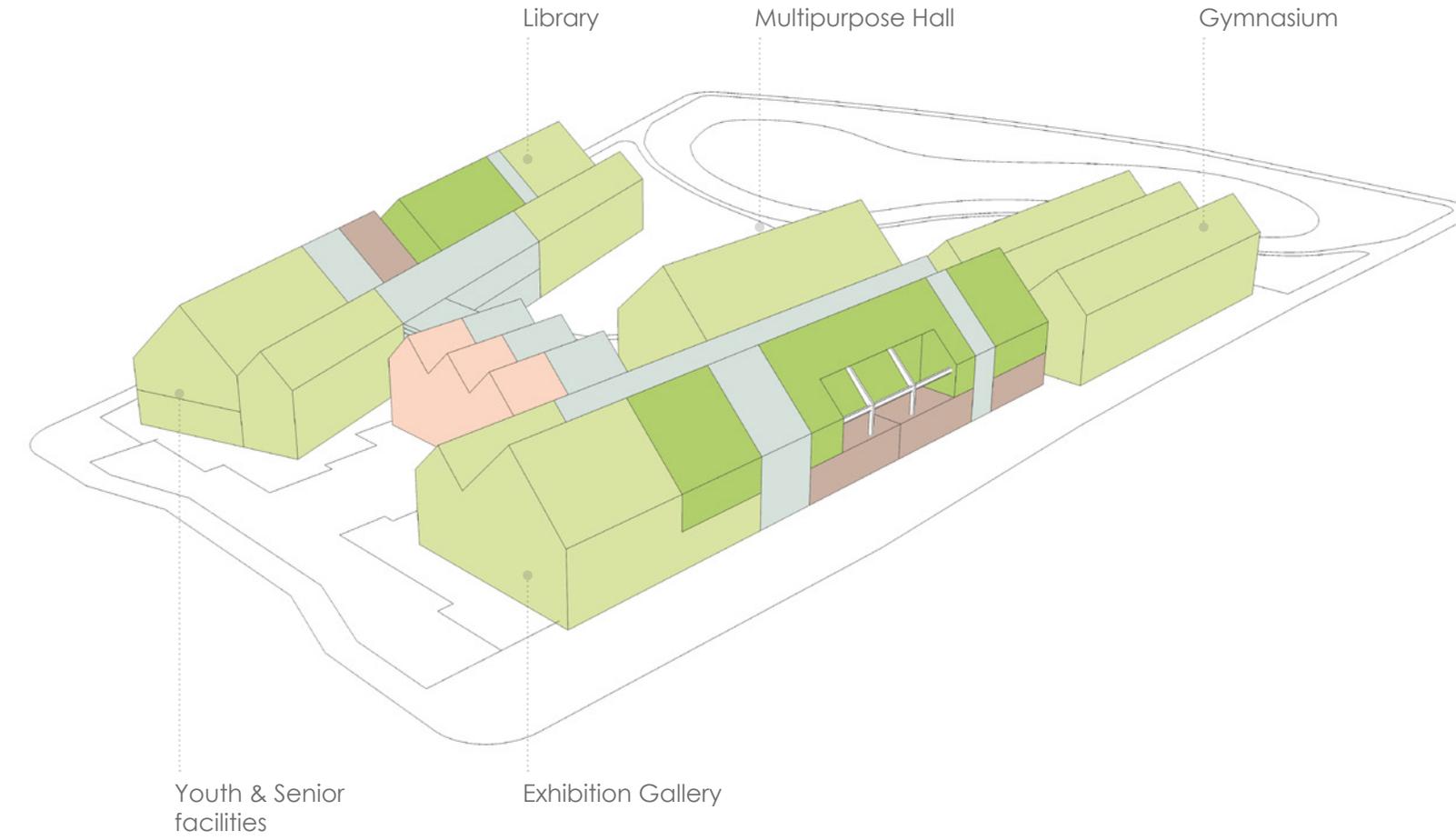
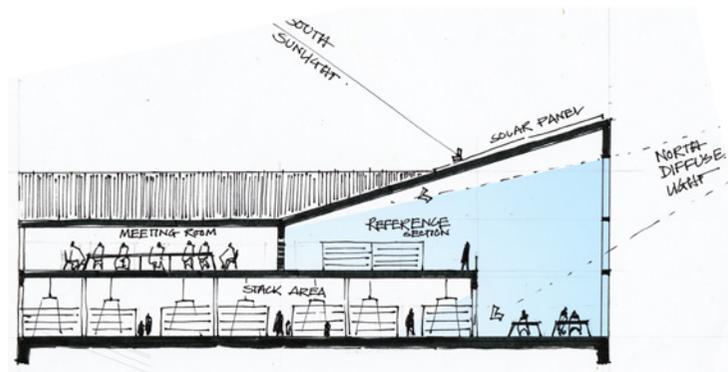


PREFERRED SECTION



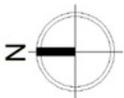
GYM

MULT. PAVILION



- MAJOR PROGRAMS
- DEVELOPMENT PROGRAMS
- MAIN ENTRANCE
- CIRCULATION
- SERVICE AND UTILITY

Process_section sketches & major programs



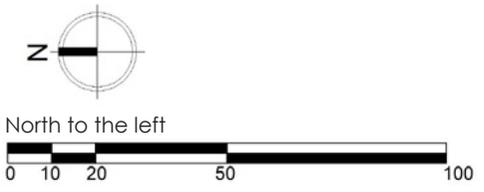
North to the left



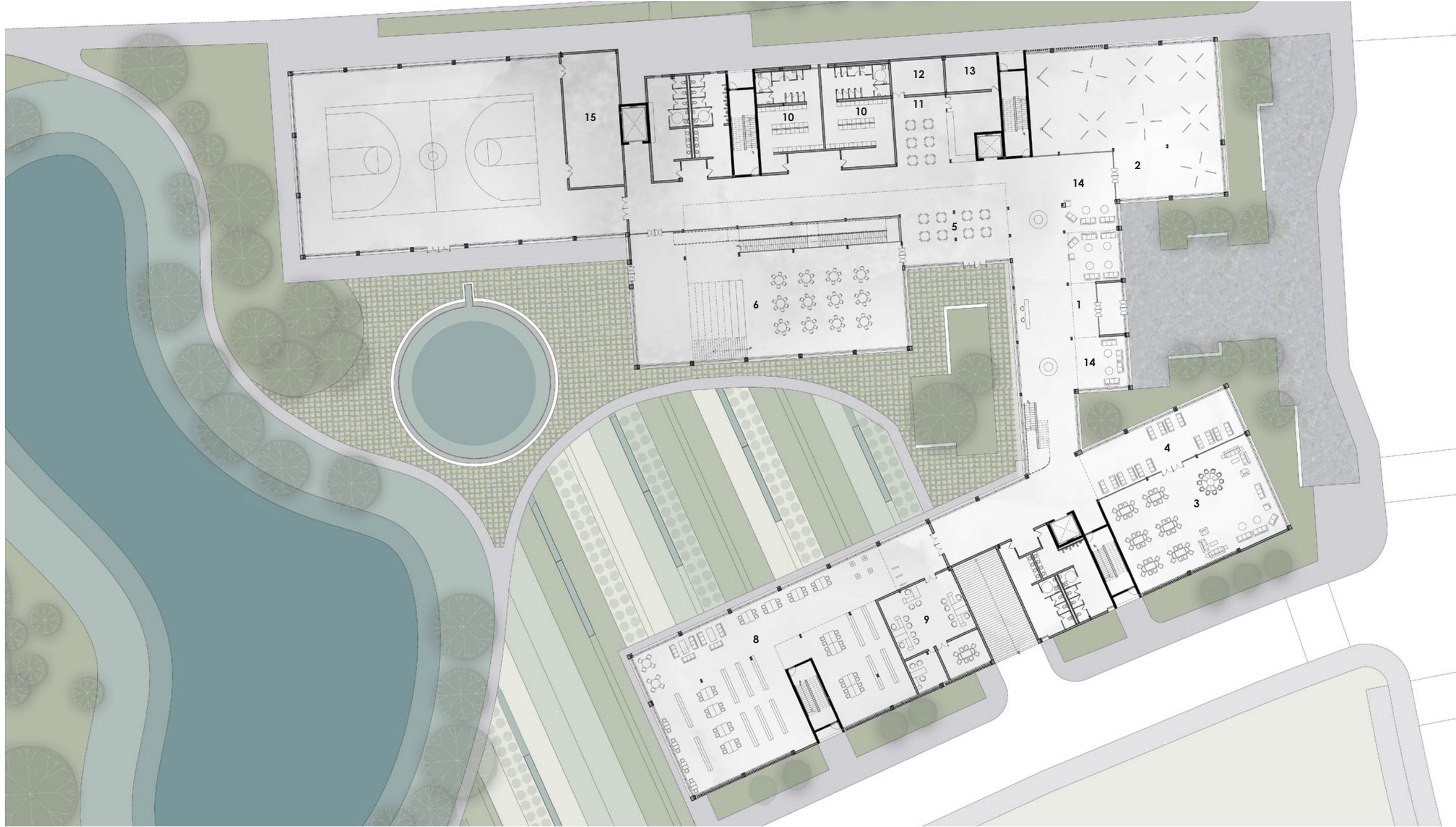
SITE PLAN

The First floor will accommodate the entrance from the front plaza and disperse the visitors to all the lounge and activity spaces. Programs that facilitate mostly public activities and gatherings are placed at this level.

- 1. Entry lobby
- 2. Exhibition gallery
- 3. Senior room
- 4. All-age lounge
- 5. Cafe seating
- 6. Multi-purpose hall
- 7. Gymnasium
- 8. Library
- 9. Administration office
- 10. Change room (M/F)
- 11. Cafe
- 12. Service storage
- 13. Cafe storage
- 14. Lounge
- 15. Gynasium storage

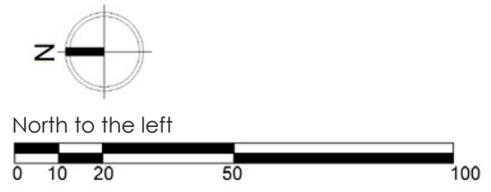


FIRST FLOOR PLAN

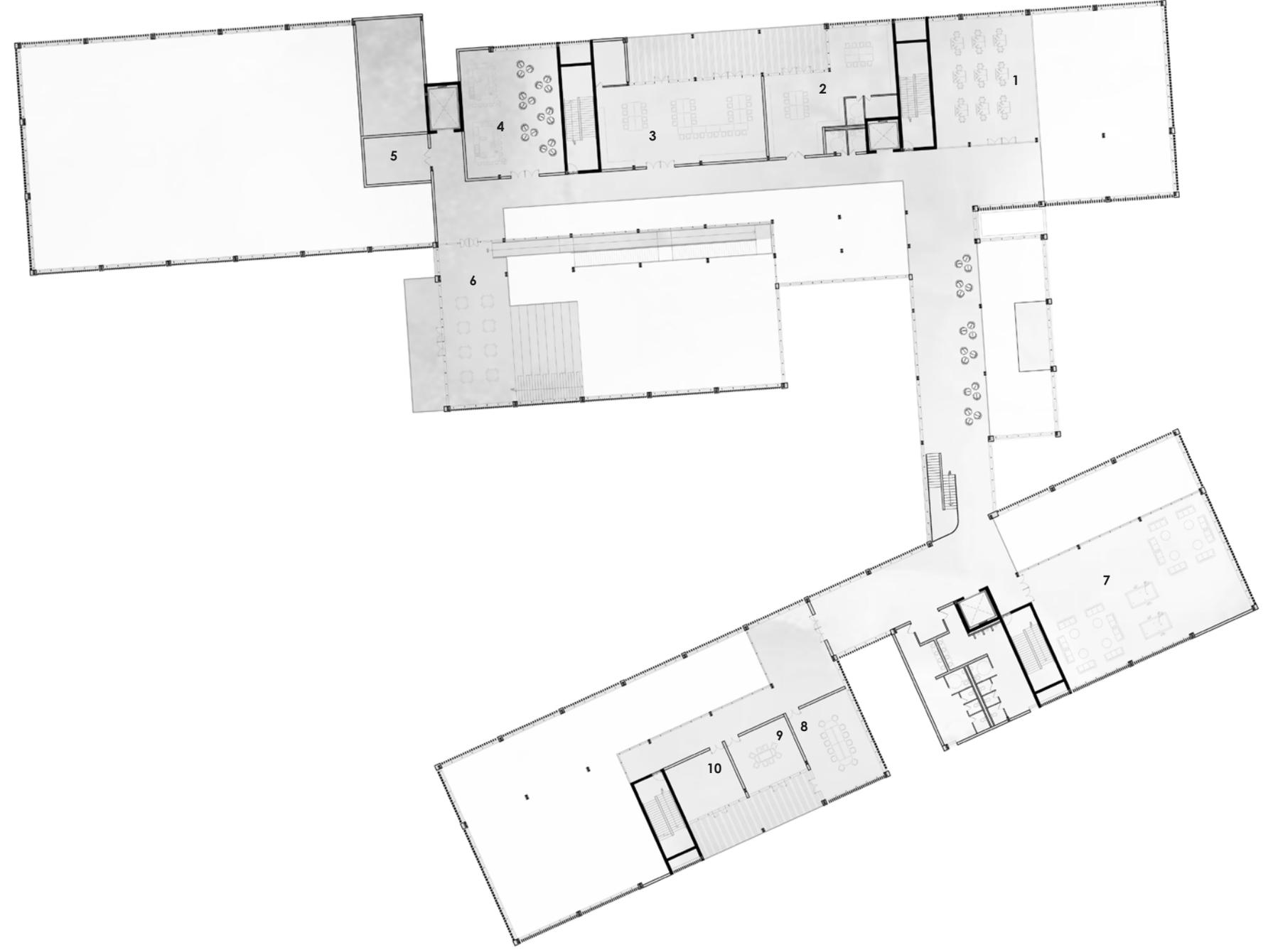


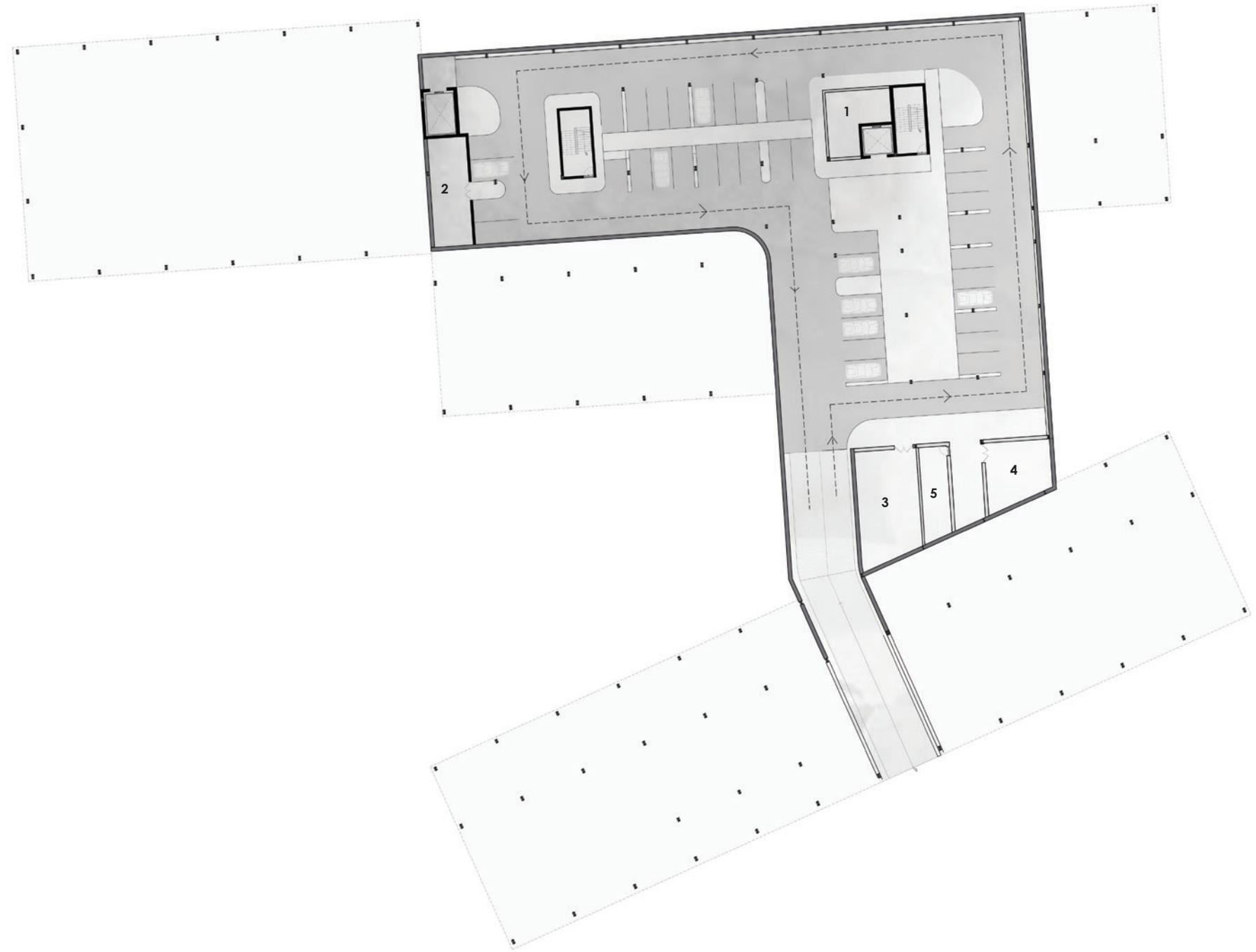
Programs that are involved with the development of certain age groups or individuals are placed on this level such as youth room, tech room, crafts room, or training kitchen. Also, spaces for meetings and counseling are provided adjacent to the library zone.

- 1. Tech room
- 2. Pre-school room
- 3. Craft room
- 4. Training kitchen
- 5. Storage
- 6. Multipurpose Hall mezzanine
- 7. Youth room
- 8. Board room
- 9. Meeting room
- 10. Counsel room

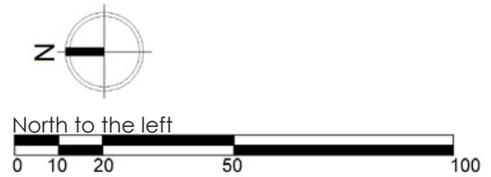


SECOND FLOOR PLAN





- 1. HVAC
- 2. Storage
- 3. EM room
- 4. Storage
- 5. Service



BASEMENT PLAN



The Community Center will be the Iconic landmark of the area.
It will stand by the community through the ups and downs as a
pathfinder.

Perspective view_Main Entrance



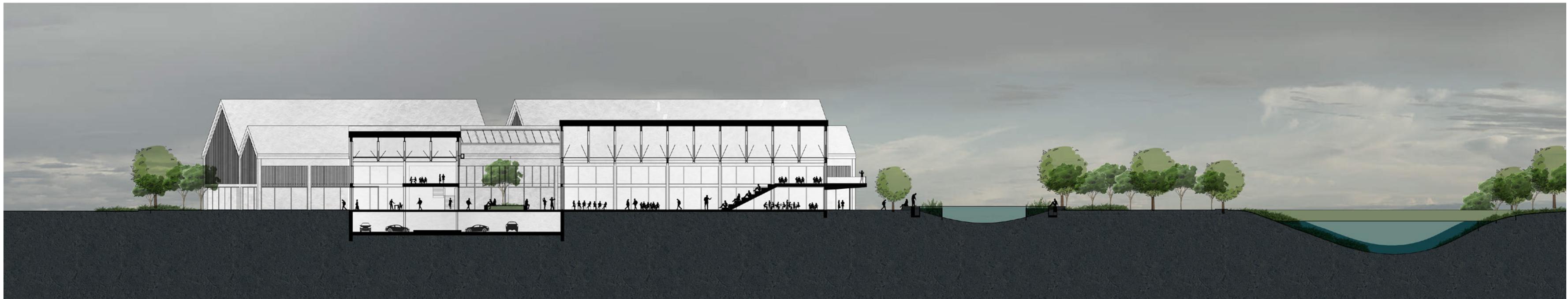
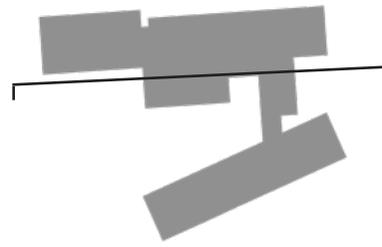
The internal courtyard will be a place for urban farming, an activity to engage the community, learning to grow one's food which will inspire to be self-sustainable.

Perspective view_The Courtyard (Urban Farming)



The courtyard will also feature a gathering place to sit, rest, gather, read around the rainwater collecting cistern that will provide cool air during the summer. The plaza will be constructed of cobblestones that will allow the ground surface to be permeable.

Perspective view_The Courtyard (Rain water collection)

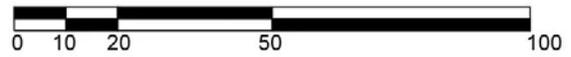


Entry plaza

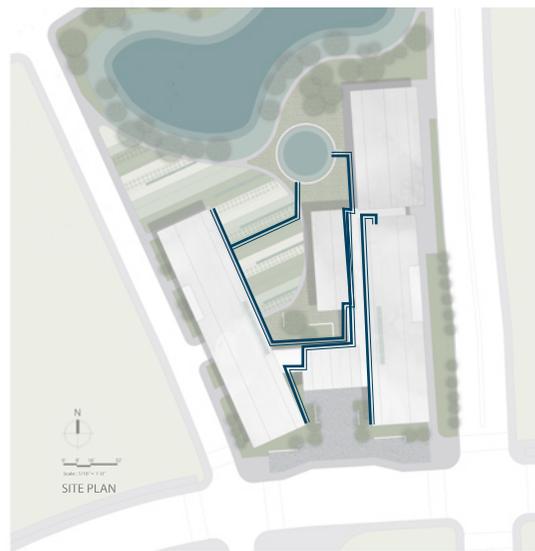
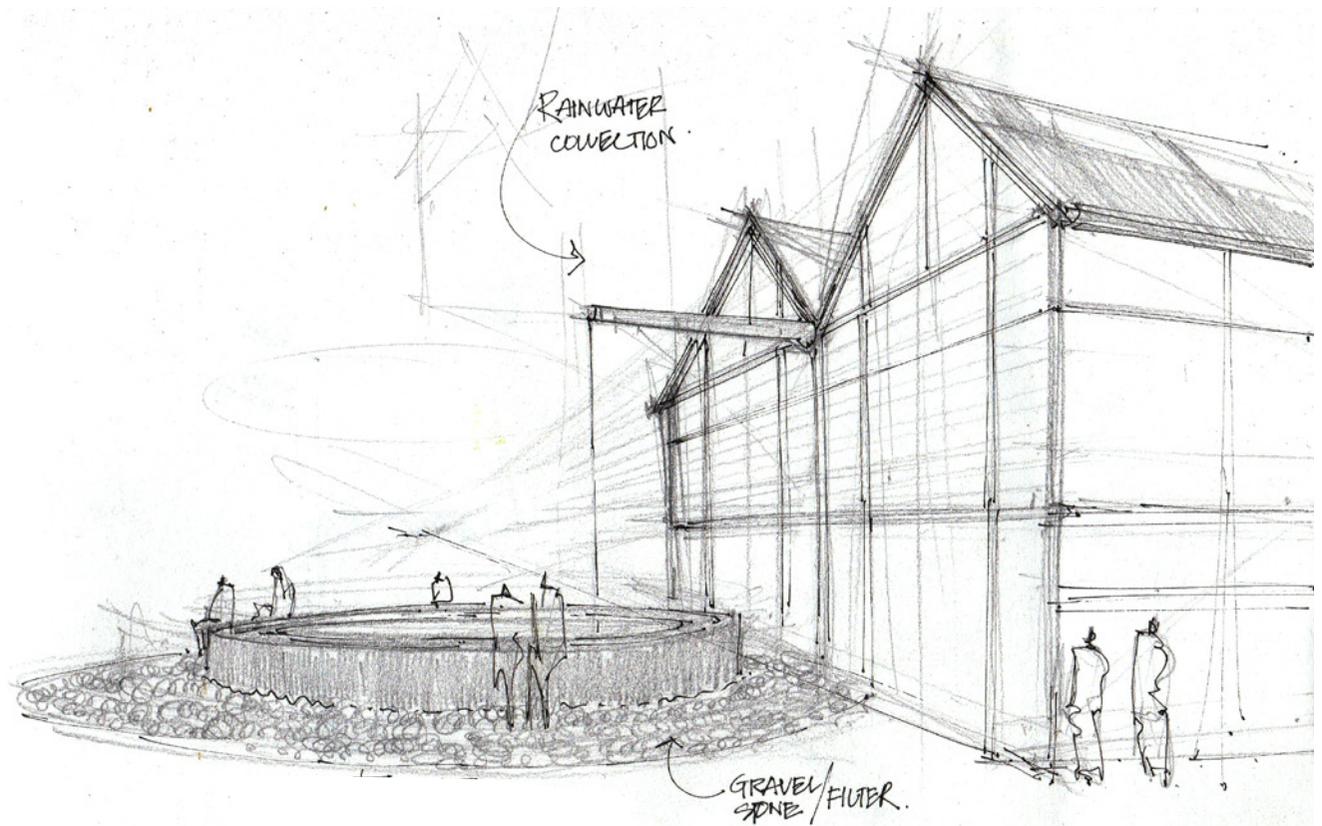
Internal courtyard

Rain water collection and reservoir

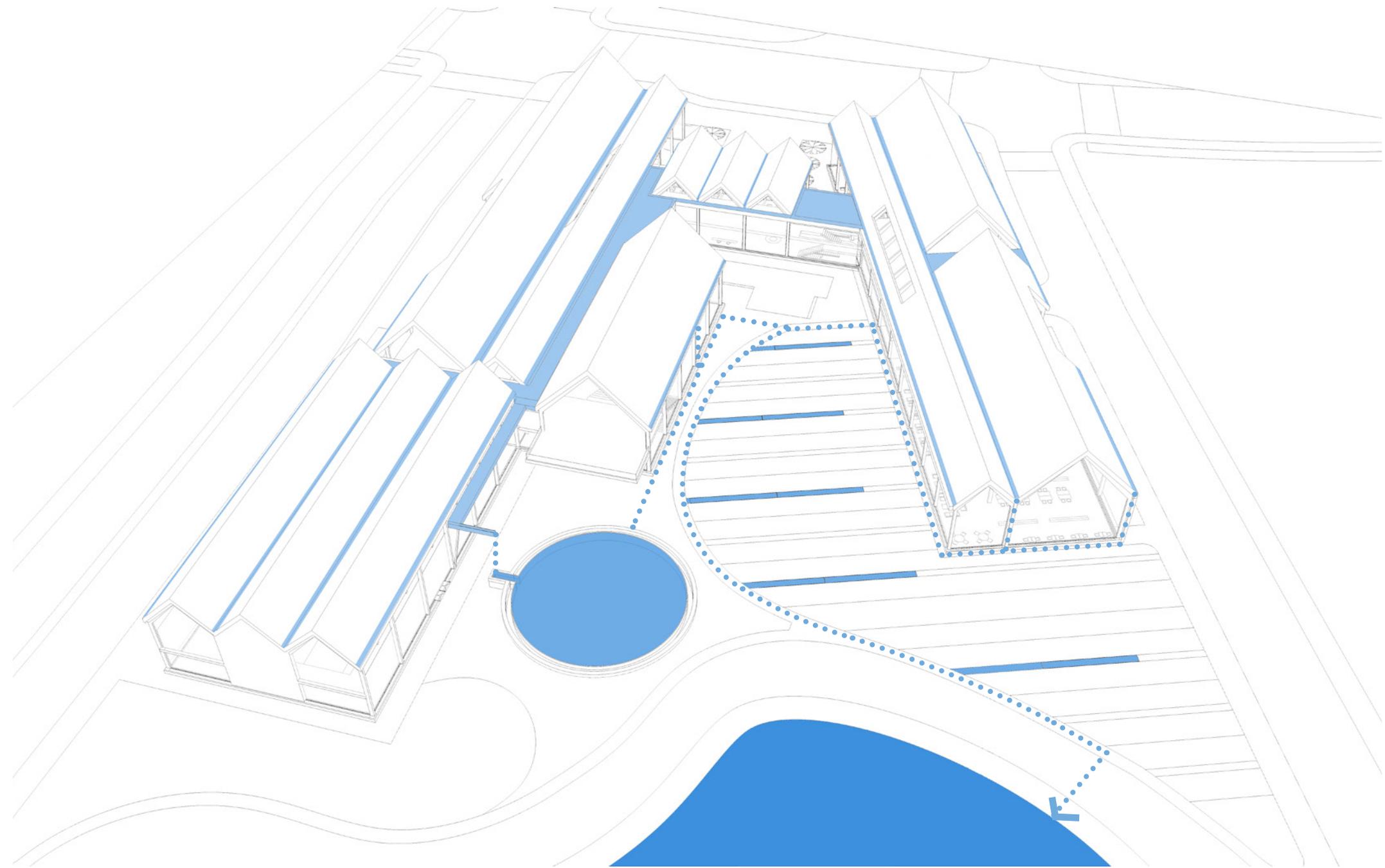
Storm water reservoir



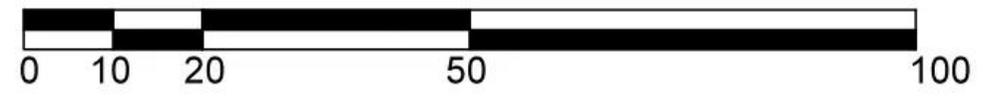
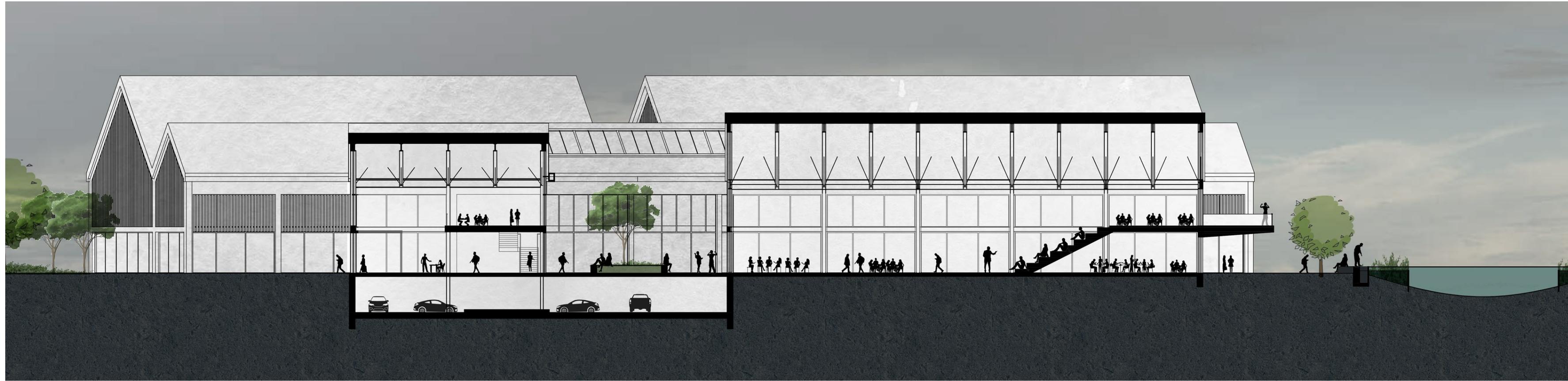
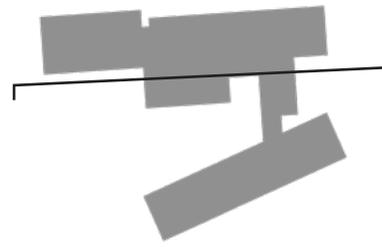
SECTION AA_extended



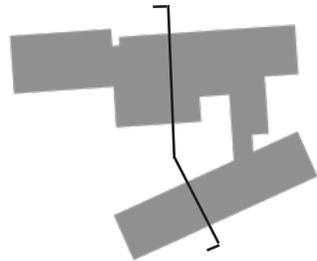
According to the statistics Muhlenberg Township has an annual rainfall of 45 mm. The roof forms will generate 5300 cubic feet of water. The rainwater collecting cistern has an area of 4000 square feet which is enough to hold the water and supply to the surrounded gardens. The excess of the water will be drained out to the natural storm water system. The proposed water pond on the North will also be used as a heat sink for the mechanical system.



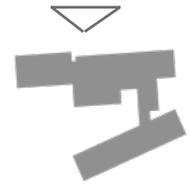
The Courtyard (Rain water collection diagram)



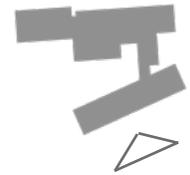
SECTION AA



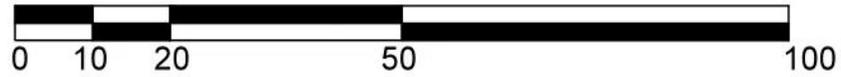
SECTION BB



EAST ELEVATION



WEST ELEVATION



ELEVATIONS



The Multipurpose hall will be the brainstorming hub for discussions, workshops, and common gatherings.

Perspective view_Multipurpose Hall



Perspective view_Second floor hallway



Perspective view_Gymnasium



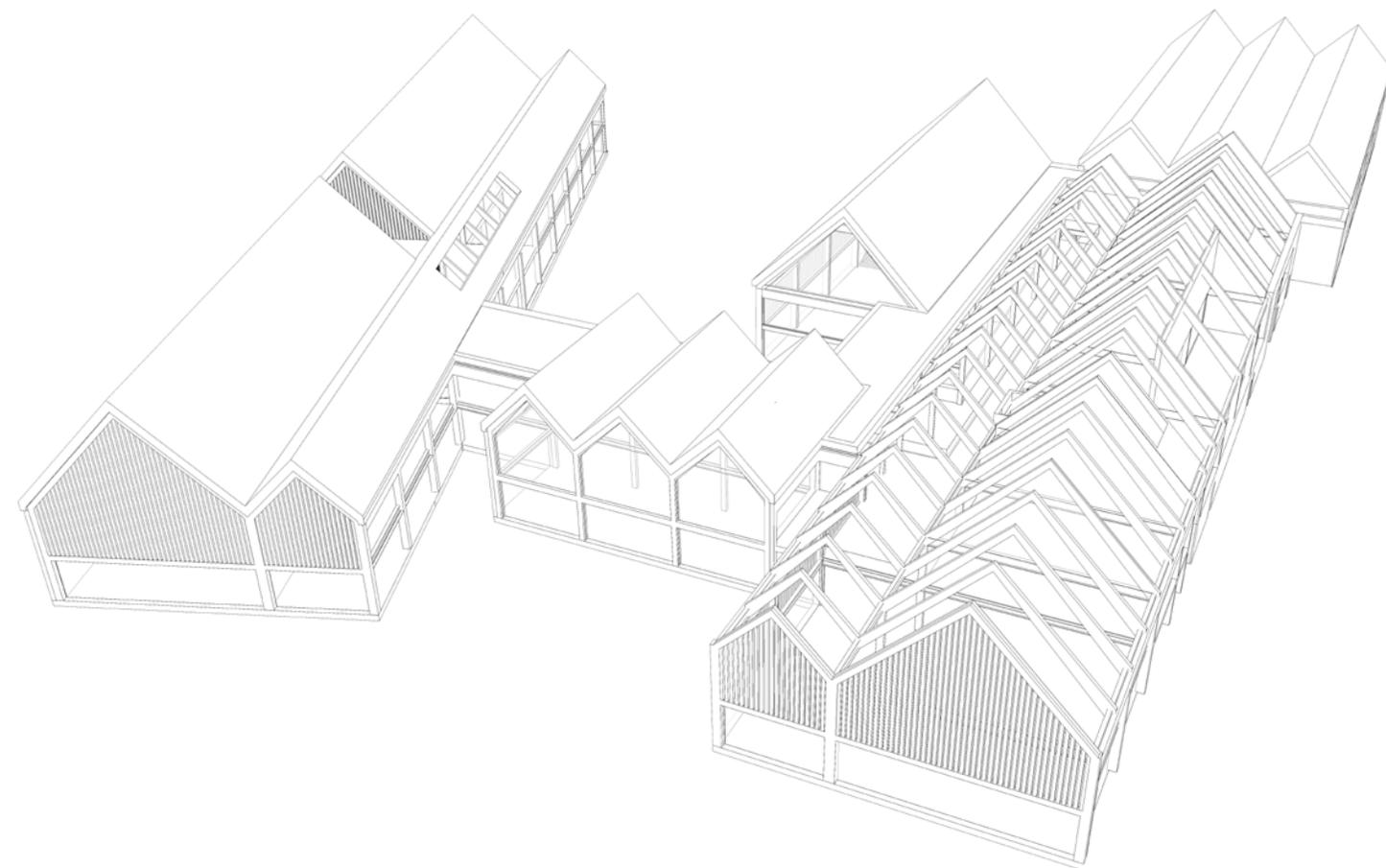
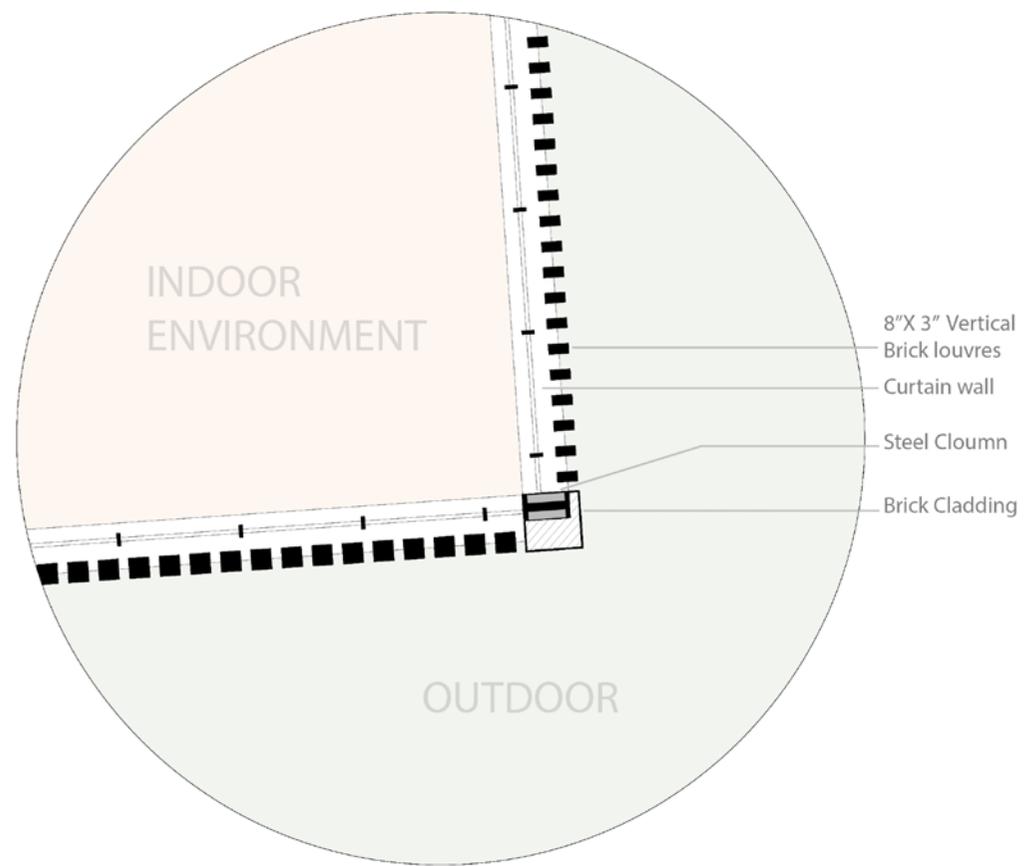
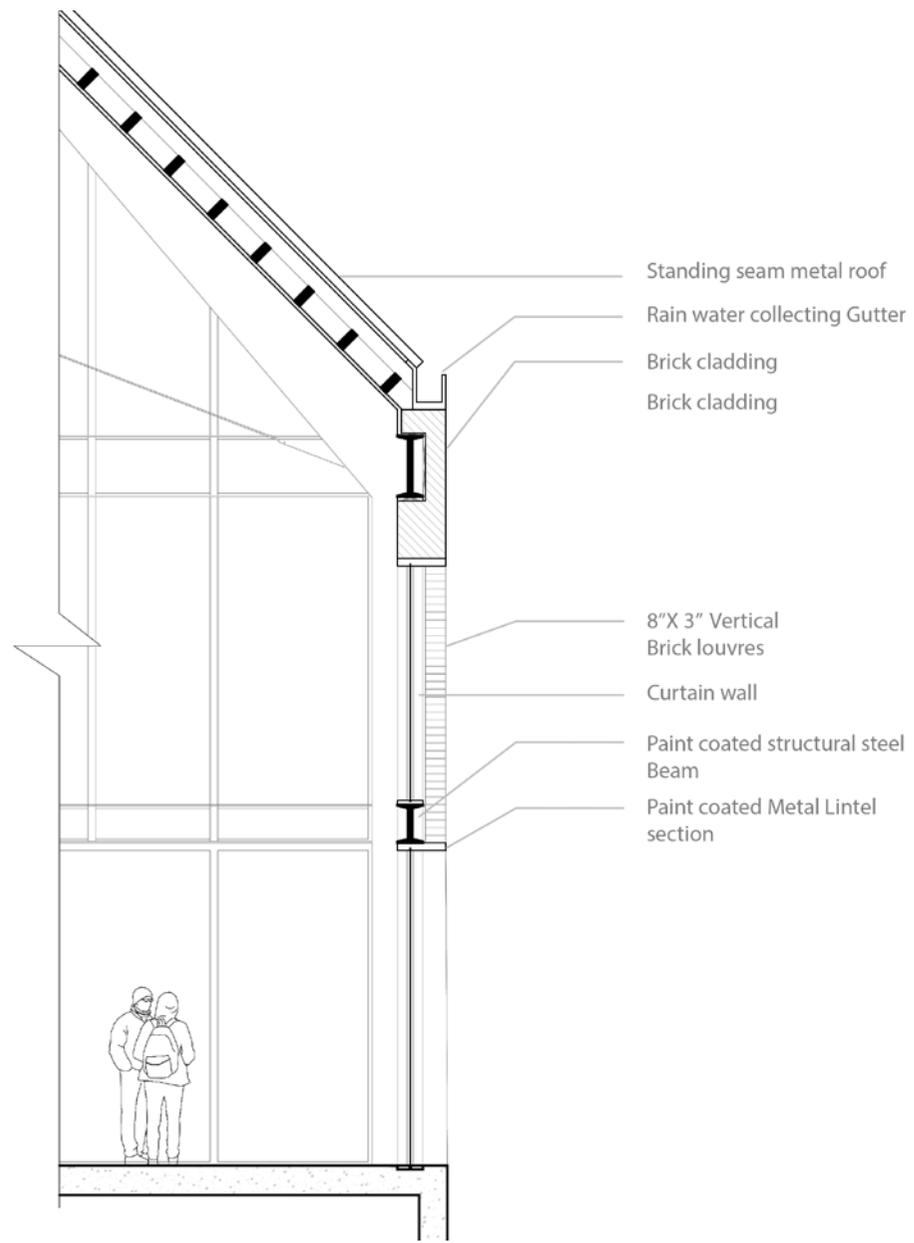
The Exhibition Gallery will be the showcase for the development process and discussion or cultural outputs to engage more people with the activities.

Perspective view_Exhibition Gallery



The All-age lounge is a space for the seniors and the youths to get together and exchange their ideas and opinions. The lounge is visually connected from both of their separate rooms.

Perspective view_All-age lounge



End Notes

- 1 Hayden, Dolores. *Building Suburbia: Green fields and urban growth, 1820-2000*.
- 2 Schwartz, Nelson D. *The Economics (and Nostalgia) of Dead Malls*, *The New York Times*, Jan. 3, 2015 <https://www.nytimes.com/2015/01/04/business/the-economics-and-nostalgia-of-dead-malls.html>
- 3 Hayden, Dolores. *Building Suburbia: Green fields and urban growth, 1820-2000*. p176
- 4 Frazer, Lance. *Paving Paradise: The Peril of Impervious Surfaces*.

Image Credits

- Figure 1:** Alex S. MacLean, Landslides. Hayden, Dolores. *Building Suburbia*. p171
- Figure 2:** Muller, Peter O., *The Outer City*. Hayden, Dolores. *Building Suburbia*. p174
- Figure 3:** <https://www.statista.com/statistics/208059/total-shopping-centers-in-the-us/>
- Figure 4:** https://www.scrapehero.com/store/wp-content/uploads/maps/Shopping_malls_USA.png
- Figure 5:** *The Economics (and Nostalgia) of Dead Malls*, New York Times. <https://www.nytimes.com/2015/01/04/business/the-economics-and-nostalgia-of-dead-malls.html>
- Figure 6:** <https://www.tenthirty.one/projects/owings-mills-mall-demolition/>
- Figure 7:** <https://medium.com/@scottcaughran/what-s-up-with-dead-malls-a53a1bd90ab7>
- Figure 8:** *The Economics (and Nostalgia) of Dead Malls*, New York Times. <https://www.nytimes.com/2015/01/04/business/the-economics-and-nostalgia-of-dead-malls.html>
- Figure 9:** Image created by author with different images found in Google search
- Figure 10:** <https://www.jbgsmith.com/property/retail/PO-TOMAC-YARD-CENTER/3313633>
- Figure 11:** <https://time.com/5904882/shopping-mall-history/>
- Figure 12:** Google street image of US 222B in front of Fair ground square mall, PA.
- Figure 13:** <https://www.nytimes.com/2015/01/04/business/the-economics-and-nostalgia-of-dead-malls.html>
- Figure 14:** <https://www.smithsonianmag.com/innovation/transformation-american-shopping-mall-180964837/>
- Figure 15:** image from Google search
- Figure 16:** https://www.reddit.com/r/deadmalls/comments/b0p9vf/landmark_mall_alexandria_virginia/
- Figure 17-21:** Google Earth satellite images.
- Figure 22:** Map re-created by author with the reference of : <https://www.muhenbergtwp.com/DocumentCenter/View/100/Zoning-Map-PDF?bidId=>
- Figure 23:** Muhlenberg township Comprehensive Plan: <https://www.muhenbergtwp.com/227/Muhlenberg-Township-Comprehensive-Plan>
- Figure 24:** Muhlenberg township Comprehensive Plan: <https://www.muhenbergtwp.com/227/Muhlenberg-Township-Comprehensive-Plan>
- Figure 25:** United States Census Bureau, Census 2000.
- Figure 26:** https://www.oldmapsonline.org/en/Berks_County%2C_Pennsylvania

- Figure 27:** <https://goreadingberks.com/the-reading-fairgrounds-in-muhlenberg-township/>
- Figure 28:** <https://goreadingberks.com/reading-fairgrounds-speed-way-the-home-of-champions/>
- Figure 29:** <https://goreadingberks.com/the-reading-fairgrounds-in-muhlenberg-township/>
- Figure 30:** <https://goreadingberks.com/the-reading-fairgrounds-in-muhlenberg-township/>
- Figure 31:** <https://www.readingpa.gov/content/history-reading>
- Figure 32:** <https://goreadingberks.com/modernization-and-urban-renewal-of-penn-street-reading-pa/>
- Figure 33:** <https://www.readingpa.gov/content/history-reading>
- Figure 34:** <https://www.american-rails.com/rdg.html>
- Figure 35:** <https://www.cityrating.com/crime-statistics/pennsylvania/muhlenberg-township.html>
- Figure 36:** <https://www.nytimes.com/2011/09/27/us/reading-pa-tops-list-poverty-list-census-shows.html>
- Figure 37:** https://www.wfmz.com/news/area/berks/fairgrounds-square-owner-mall-needs-to-be-demolished/article_c91c472b-9ef3-52cf-a4fb-d3a0e50b6b87.html
- Figure 38:** https://www.wfmz.com/news/area/berks/demolition-work-underway-at-fairgrounds-square-mall/article_ca10ae4a-a5cc-11ea-addf-a3c46a3c156d.html
- Figure 39:** Muhlenberg township Comprehensive Plan: <https://www.muhenbergtwp.com/227/Muhlenberg-Township-Comprehensive-Plan>
- Figure 40-44, 47:** Google Street Views.
- Figure 45,46,48,49:** Photographs taken by author.
- Figure 50:** <https://www.deseret.com/2011/12/29/20390938/cottonwood-mall-site-still-in-development-attracting-national-retailers#cottonwood-mall-rendering-illustration-of-property>
- Figure 51:** <https://www.deseret.com/2011/12/29/20390938/cottonwood-mall-site-still-in-development-attracting-national-retailers#cottonwood-mall-rendering-illustration-of-property>
- Figure 52:** Collage prepared by author according to National Register of Historic Places listings in Berks County, PA. https://en.wikipedia.org/wiki/National_Register_of_Historic_Places_listings_in_Berks_County,_Pennsylvania#cite_note-1
- Figure 53-55:** Google Earth images.
- Figure 56:** Camp del Ferro Sports Center, Barcelona <https://www.dezeen.com/2021/01/23/camp-del-ferro-sports-centre-barcelona-bricks/>

Bibliography

- Duany, Andres. *Suburban Nation : the rise of sprawl and the decline of the American Dream*.
- Dunham-Jones, Ellen. *Retrofitting suburbia : urban design solutions for redesigning suburbs*.
- Fishman, Robert. *Bourgeois utopias : the rise and fall of suburbia*.
- Frazer, Lance. *Paving Paradise: The Peril of Impervious Surfaces*.
- Hayden, Dolores. *Building Suburbia: Green fields and urban growth, 1820-2000*.
- Schwartz, Nelson D. *The Economics (and Nostalgia) of Dead Malls*, *The New York Times*, Jan. 3, 2015 <https://www.nytimes.com/2015/01/04/business/the-economics-and-nostalgia-of-dead-malls.html>
- <https://www.cnu.org/who-we-are/charter-new-urbanism>

