

Main Street Revitalization

Woonsocket, RI

Community Partners:

City of Woonsocket, Rhode Island

RI Economic Development Corporation

Academic Partners:

School of Architecture, Art, &
Historic Preservation

Spring 2013

The Roger Williams University Community Partnerships Center

The Roger Williams University (RWU) Community Partnerships Center (CPC) provides project-based assistance to non-profit organizations, government agencies and low- and moderate-income communities in Rhode Island and southeastern Massachusetts. Our mission is to undertake and complete projects that will benefit the local community while providing RWU students with experience in real-world projects that deepen their academic experiences.

CPC projects draw upon the skills and experience of students and faculty from RWU programs in areas such as:

- Architecture and Urban Design
- Historic Preservation
- Law
- Justice Studies
- Business
- Education
- Engineering and Construction Management
- Environmental Science and Sustainability
- Community Development
- Visual Arts and Digital Media
- Marketing and Communications
- Graphic Design
- Political Science
- Psychology
- History
- American Studies
- Finance
- Public Administration
- Public Relations
- Writing Studies
- Sustainable Studies

Community partnerships broaden and deepen the academic experiences of RWU students by allowing them to work on real-world projects, through curriculum-based and service-learning opportunities collaborating with non-profit and community leaders as they seek to achieve their missions. The services provided by the CPC would normally not be available to these organizations due to their cost and/or diverse needs.

CPC Project Disclaimer: The reader shall understand the following in regards to this project report:

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2. The deliverables generated hereunder are intended to provide conceptual information only to assist design and planning and such are not intended, nor should they be used, for construction or other project implementation. Furthermore, professional and/or other services may be needed to ultimately implement the desired goals of the public in ownership of the project served.
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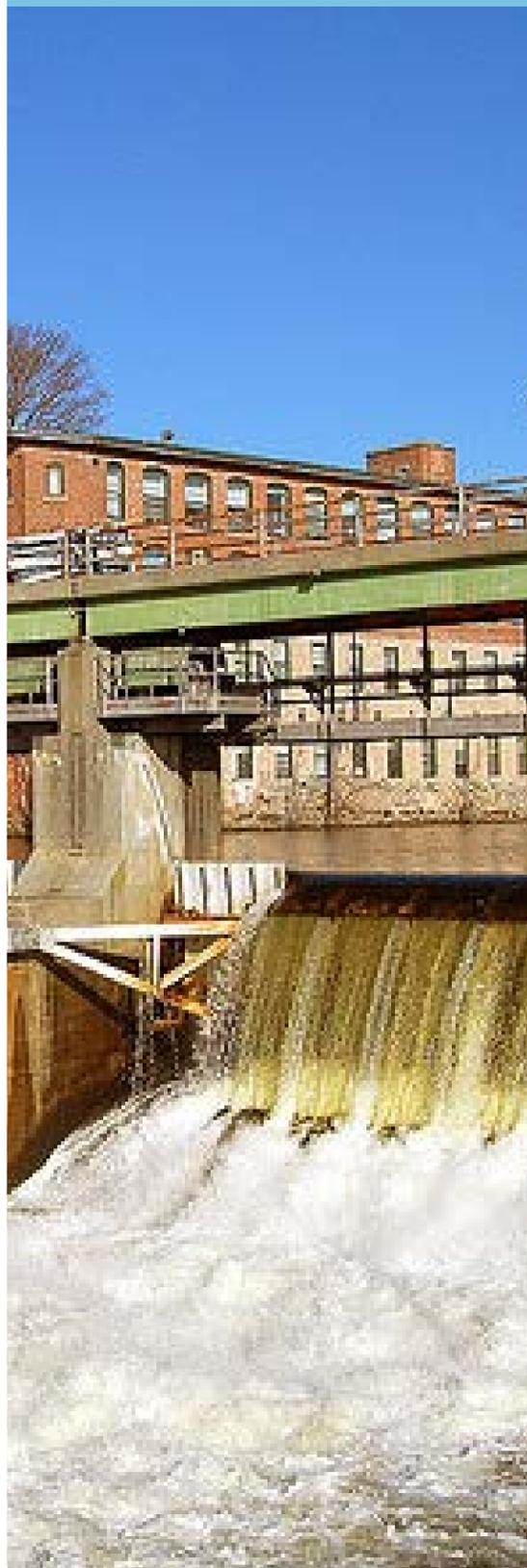
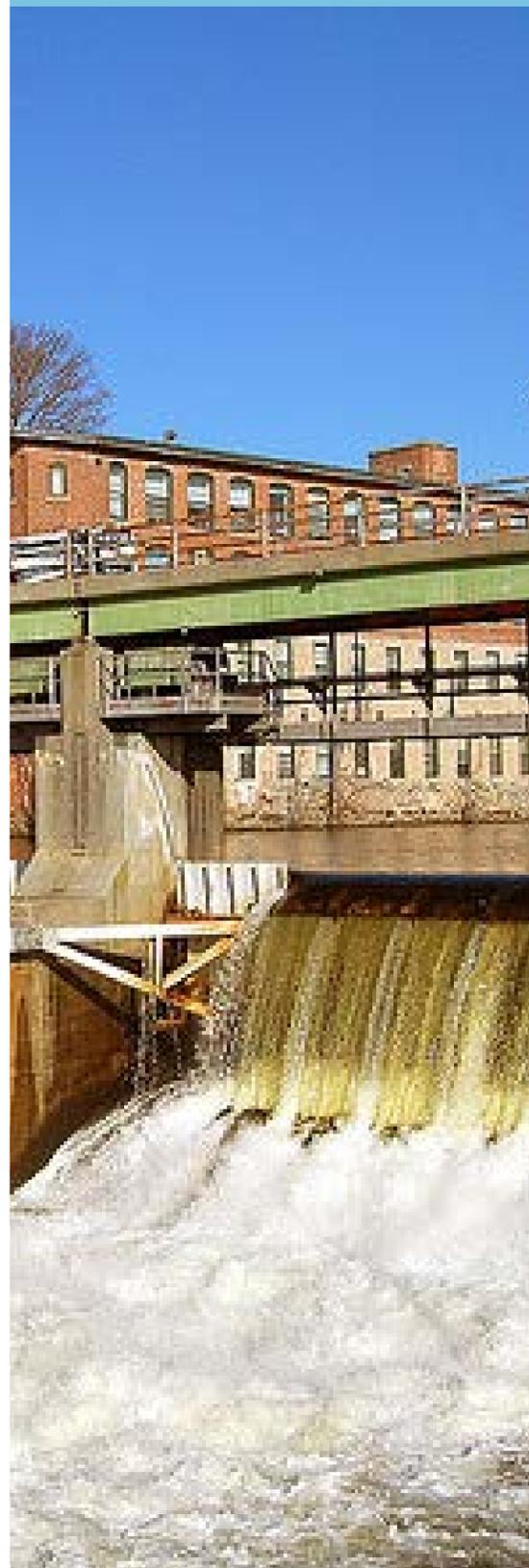


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Site 1: 2 Monument Square

Senior Art Center – Team 1 – Emily Regner

Woonsocket Center for Ecology – Team 4 – Rebecca Sargent

Site 2: 300 Main Street

Woonsocket Community Center – Team 5 – Amanda O’Malley

Site 3: 220 Main Street

Niswosakit Community Care– Team 2 – Matthew Bird

Site 4: 180 Main Street

Information/ Tourist Center – Team 1 – Meghan Spratt

Urban Work / Live Community – Team 3 – Zach Nelson

Bistro-Bar / Artist’s Residence – Team 5 – Jason Waisnor

Site 5: 90 Main Street

Aquatic Center – Team 3 – Colby Karambelas (Site 5 + 6)

Real Goods Living Center – Team 2 – Andres Daza (Site 5 + 6)

Site 6: 40 Main Street

Urban Ecology Center – Team 1 – Sarah Volkman

Children’s Museum & Youth Center – Team 4 – Jessica MacDonald

Introduction

Arch 515: Graduate Design Studio - Spring 2013

The Graduate Studio of School of Architecture, Art and Historic Preservation has worked on the Woonsocket Main Street Revitalization project as part of Roger Williams University Community Partnerships Center activities. The main task of the studio was to achieve an ecological / sustainable Master Plan and infill designs for the Main Street historic artery. The students have developed five Master Plan proposals with urban sustainable initiatives while reactivating six dormant spaces / lots / places (all are utilized as parking, some of which are underutilized) while greening Main Street and its vicinity. Alternative Master Plans were accomplished by 5 teams – a team of three and four teams of two. Each team member designed one of the infill projects in context of their Master Plan.

The proposals intended to improve the present condition of Main Street by introducing revitalization plans to attract local residences as well as visitors and establish an active, lively and memorable urban corridor. The Main Street Revitalization plan and design was viewed in a holistic manner; therefore, following a detailed research, the students have looked at initially the larger context that is the Main Street's impact zone, such as surrounding neighborhoods in downtown Woonsocket and the Blackstone River corridor which are the core of the history of the city. The goal was to visualize Main Street transforming into a vibrant artery with diverse and appropriate uses, respecting the city's historic context and integrating features such as

ecological, social and cultural significance of the place. The planning of the Main Street through infill proposals, establishing a vision to impact beyond its boundaries and coming up with alternative projects at multiple scales - urban to architecture including landscape design - were among significant tasks of this graduate studio. The infill projects were materialized in context of an Ecological Master Plan and demonstrate how this new vision will make the Main Street a place where social, cultural, ecological and historical assets of Woonsocket will be shared by all.

The alternative proposals for infill(s) include a variety of themes for the Main Street Revitalization Plan. They are mostly inspired by the "Woonsocket Comprehensive Plan (updated 2011/12)" and the "Woonsocket Main Street Livability Study: Request for Proposals". The findings and recommendations of the Public Meeting of Dec. 12 on the Woonsocket Main Street Livability Plan by Cecil Groups have also been taken into consideration.

Proposals have included green roofs and vertical green which will reduce the heat island effect, and hence carbon emissions, as well as contribute to the beautification of the urban corridor. The Urban Revitalization Plan, starting with the Main Street, and displaying sustainable and ecological features in the design and planning will attract many to this revived historic corridor and will also support the city's economic development plans.

The Teams + Their Sites

Master Plan I

Senior Art Center	Emily Regner	Site 1
Information / Tourist Center	Meghan Spratt	Site 4
Urban Ecology Center	Sarah Volkman	Site 6

Master Plan II

Urban Live / Work Community	Zach Nelson	Site 4
Aquatic Center	Colby Karambelas	Site 5/6

Master Plan III

Niswosakit Community Care	Matthew Bird	Site 3
Real Goods Living Center	Andres Daza	Site 5/6

Master Plan IV

Woonsocket Center for Ecology	Rebecca Sargent	Site 1
Children's Museum & Youth Center	Jessica MacDonald	Site 6

Master Plan V

Woonsocket Community Center	Amanda O'Malley	Site 2
Bistro-Bar / Artist's Residence	Jason Waisnor	Site 4

The infill proposals and planned outdoor spaces as part of the sustainable revitalization plan will enhance community interaction, which will also enliven the Main Street. Supporting functions such as cafes, restaurants, music / art workshops, display areas, etc. will bring much desired quality of life to downtown Woonsocket. Reinforcing the performing arts and including workshops producing art works for all age groups (especially performed by local artists) will energize the Main Street corridor. In addition, an aquatic center and sustainable buildings will be magnet learning environments that will make this green corridor a very unique place.



Arch 515 Syllabus (abbr.)

ROGER WILLIAMS UNIVERSITY SCHOOL OF ARCHITECTURE, ART AND HISTORIC PRESERVATION
Course # ARCH 515: Graduate Architectural Design Studio
Faculty: Ulker Copur
Title of the Project: Main Street Revitalization, Woonsocket, RI

Students may select from a number of directed studios in fulfilling the Graduate Architectural Design Studio requirement for the Master of Architecture degree. Offerings at this level are enriched by studios focusing on topics such as urban design, housing, sustainable design, contemporary technologies, interior architecture, historic preservation and others.

Main Street Revitalization Plan with a brief Historical Background

The city of Woonsocket was inhabited by native Indians beginning 300 AD until 17th century when European settlers moved into the region, and was established during 1880's as an industrial mostly textile mill town along the banks of Blackstone River (See detailed historical background in Woonsocket Comprehensive Plan Update 2011/2012, Section E; and; City of Woonsocket, RI: Woonsocket Main Street Livability Study). It was composed of cluster of villages originally and developed as one of the earliest well-knit communities with a sense of place and identity. The Blackstone River where the American Industrial Revolution started, generated additional challenges and transformed the city into its unique form and the city is known for its textile mills. Following the depression of 1930's and moving textile industry to south in 1950 leading into another economic depression, Woonsocket downtown and the mills lost their vitality and hence caused the decline of the Main Street functions. In a couple of decades the Main Street ended up with vacant lots of demolished buildings, underutilized vacant property, and under use of quite a number of historic buildings .

Woonsocket is the home for one of the earliest Medical Corporations (Seth Arnold, medicine manufacturer, 1840's) in USA and maintains the headquarters of CVS-Caremark. The city also attains an ethnic background of French or Canadian French. The population cohort has become more diverse since 1980 with increasing Asian and Latino inhabitants. The town also displays religious diversity. Therefore we see a very rich cultural and social fabric that represents the city and hence can contribute to improvements and revitalization of Woonsocket.

Learning objectives and goals:

The Main Street Revitalization project is expected to achieve the following goals:

- +To be able to integrate sustainability initiatives as part of master plan, urban design and architectural and landscape design scales;
- +Understand the significance of historic resources as an important asset for place making;
- +To comply with design interventions in an environment ("the Main Street") where impacts of nature, culture and social life in Woonsocket will be highly prioritized;
- +To be able to accommodate the needs of elderly, handicapped, ethnic groups and children in the entire revitalized area and provide job opportunities through proposed new and maintained or transformed uses in down town Main Street;
- +To be able to develop the Main Street in response to diverse user needs and with concepts well-knit dense context (urban corridor) and river ecology with pedestrian walkways, small urban pockets and improved urban green (including organic farming) to enhance outdoor experience ;
- +To comply with sustainability features such as dealing with urban ecology, energy conservation, efficient resource use, low environmental impact and healthy living environment;
- +To be able to propose ecologically appropriate infrastructure and comprehensive water management system including an aquatic center in one of the vacant lots;
- +To be able to generate a pedestrian friendly environment by supporting alternative transportation systems;
- +To initiate the use of renewable energy sources and sustainable low/high technologies;
- +To be able to generate an aesthetically viable Main Street environment with infill center(s) in vacant lots compatible with the historic buildings but in contemporary context;

+To emphasize pedestrian linkages between activity nodes of Main Street and Blackstone River;

+To be able to reduce the ecological footprint with respect to infill proposals through sustainable planning, urban, architectural and sustainable landscape design initiatives.

Issues of Focus:

The students are anticipated to concentrate on the following issues in their project proposals:

1. A sustainable development and growth integrating existing historical heritage of Main Street to Downtown Woonsocket;
2. Create a thematic focus (foci) that will display the vision so that it will activate underuse historic resources with adaptive re-use and assign infill property with appropriate land use (open spaces, vacant lots and parking and/or buildings) responding to present as well as future needs;
3. Introduce an aesthetic manifestation of a street-scape that will respond to visual, audial, kinesthetic and tactual senses with materiality, color; and with adaptable and fitting interventions on pedestrian level, facades and roof-scape;
4. Maintain the integrity of social and cultural dynamics of Woonsocket's local population groups and town administration as part of the planning process;
5. Include mix use with residential in the Main Street Corridor to maintain sustained and continued use for buildings and open spaces through day, night, weekends, seasonal and during holiday celebrations;
6. Create multi-model linkage systems favoring pedestrian and easing public transportation modes (in context of potential commuter rail and extending Blackstone bike path) to reduce carbon emissions and enhancing the connection between National Heritage Corridor to Down Town and to the Main Street area and to their surroundings.
7. Consider climatic, topographic and ecological impact on site considerations as well as infill projects.
8. Plan regenerative process to improve outdoor use and increase social

interaction through visibility and accessibility of Main Street activity nodes;

9. Introduce renewable energy options and energy conservation through design of infill building(s)

10. Generate a learning environment of urban ecology in a historic context to mitigate Woonsocket's social, cultural, historic and environmental resources.

Phases of the Project:

This Graduate Studio will be engaged with multiple phases of Main Street Revitalization project:

Research:

1. Site Analysis: A detailed analysis of climate, nature, topography and existing urban, physical and spatial configuration of Main Street in context (site visit);
2. Precedent Analysis: Examining cases that are critical issues in benchmark projects of similar conditions;
3. Main Street & Land use Analysis: Maintain or transform existing uses; introduce new ones (infill) compatible with Woonsocket's history, society and culture (in consultation with Woonsocket officials, local participants and CPC) and look into future. Land use will be detailed with Program development as the project advances throughout the semester.

Ecological Master Plan

4. Master Plan (Ecological Master Plan of Woonsocket Main Street) in context of Black Stone River in the Vicinity and Down Town.

Urban Design

5. Urban design development of the Main Street with the proposed infill project(s) and the reassessed existing buildings for improvement.

Infill Projects

6. Architectural scale design of infill Project(s).
7. Design Guidelines

All information and data publicly available by Woonsocket Department of Planning and Development will be utilized in the advancement of the studio projects and will be a base to make decisions. Each phase of the project

will be reviewed and coordinated by academic and professional critics, Woonsocket officials and CPC.

Project Site Development and Revitalization / Infill:

Main Street revitalization project site is located between Lincoln Textile Mill, now Museum of Work and culture, East of Market Square in the south and the Stadium Theatre in the North. The Main Street consists of historic and infill buildings as well as empty lots some used for parking. The revitalization proposal will look into a viable Master Plan that will support city's incentives to preserve historic resources, reinforce heritage tourism initiatives; and support local artists, innovative healthcare and small businesses. The Master Plan and the urban design of the Main Street should have positive impact to Blackstone River which embraces the southern portion of Main Street. The Main Street Revitalization plan should be integrated with the existing Master Plan of Blackstone River (part of the Comprehensive Plan) and the Down Town Plan. The "in-between spaces / zones" or "thresholds" between the Main Street and the Blackstone River should also be referred as part of the context.

The Revitalization Plan will consider an Ecological Master Plan in context that involves both the river and river edges and the Main Street as a whole. The Main Street is an artery in between ascending and descending topographical section from West to East. Connections from Main Street to upper and to lower elevations and how they will be manifested will be challenging landscape, and city scape considerations. The Blackstone River also cascades from higher to lower elevations breaking with Woonsocket Waterfall. The trench in front of the Southern section of Main Street channeled water from the Woonsocket River to power the mills along Main Street. The historic channels of Woonsocket canals could also be revitalized as part of the ecological urban plan. In spite of certain problems prevailing along the Main Street, there are multiple dormant but potential elements ready for contributing to its improvement.

All proposed interventions, including ecological ones may require development of urban landscaping, pedestrian walkways and linkages to higher and lower levels West and East of Main Street, night illumination (CPTED) and arrival/departure points and pedestrian connections to and from Blackstone River to establish a continuous experience that signifies relationship between nature, residential and the urban environment. The Main Street's proximity to Blackstone River in the Southern section of the Main Street including the large gaps allows much potential to be developed and definitely will be part of the revitalization Plan. Woonsocket needs a new urban structure starting with the Main Street that can be enriched with small urban parks, social / cultural outdoor rooms, outdoor fairs and infill places (thematic centers – such as Center for Urban Ecology, Aquatic Center, Center for Natural Medicine,) - nodes) which can be identified and connected with linkages to Blackstone River Corridor and/or to surrounding neighborhoods.

The Main Street needs a continued aesthetic appearance or beautification. Elegant historic buildings by themselves are not enough to contribute much unless they are integrated as part of the street scape or landscape. Both

historic and proposed newer buildings should display variety within some kind of uniformity in physical articulation. The scale should be an important aspect not only with respect to new buildings but also with small openings in the street façade. It will be interesting to look at the façade variations, display windows of the street and propose attractive store, or street fronts as part of the Urban Design Project. There could be thematic displays in the store fronts and planned outdoor rooms by local artists. This is very critical for the Main Street to gain its identity, so that those who come to visit Woonsocket; the Main Street will be the place to go first.

The Main Street recently started to be activated by two major nodes in both ends, the Stadium Theatre and the Museum of Work and Culture which enabled to support service functions of small size all / part of daily activities such as restaurants, live music, and other entertainment alcoves along the Main Street. This, as Comprehensive Plan (2011 update) and Woonsocket Main Street Livability Study describes, is not sufficient to make Main Street a lively urban corridor. Some historic buildings still need adaptive reuse to accommodate to the fore-planned vitality of the Main Street. Most of the upper levels of Main Street buildings are vacant and the proposed zoning will look into assigning appropriate functions, most of which will be residential. The empty lot(s) which are low activated zones (unsustainable urban lots) can be activated by mix-use outdoor functions such as seasonal markets, public art shows, mini concerts, urban organic farming where some could be temporary and others be permanent. The infill building(s) which could be developed in context of the Main Street Revitalization Plan will be multivalent in their uses. The top floors of those infill building(s) as mentioned could have varied small size residential units where work and live situations (for local artists, workshop owners and for those who will work in proposed infill buildings) can be created. The mix use infill building(s) are also anticipated to have minimum ecological footprint including maintaining energy efficiency and passive solar design initiatives.

The alternative proposals for infill(s) include variety of themes for Main Street Revitalization Plan. They are mostly inspired by the "Woonsocket Comprehensive Plan (updated 2011/12)" and the "Woonsocket Main Street Livability Study: Request for Proposals". The findings and recommendations of the Public Meeting of Dec. 12 on Woonsocket Main Street Livability Plan by Cecil Groups will also be taken into consideration.

The infill building(s) could be designed either as training, information or as learning center(s) contributing to the vision of Woonsocket Down Town. The below mentioned alternative facilities could be established in one or more of the vacant spaces or (parking) lots or as adaptive reuse in historic buildings. Programs for these infill space(s) whether outdoors or buildings(s) will be worked out within the program phase of the project. The following project titles are just suggestions; they could be changed or substituted by new ones depending on the discussions with CPC and Woonsocket Officials as well as students might come up with other creative proposals.

Alternative project proposals (suggestions) for vacant lots, partial parking areas, infill building(s) outdoor spaces:

- +Residential Building
- +Renovation Training Center (Energy efficiency)
- +Heritage Tourism Center (Sustainable Tourism)
- +Urban Ecology Learning Center
- +Culinary Center
- +Pharmaceutical Center (health care)
- +Aquatic Center (to absorb the addition load on infrastructure)
- +Small size urban parks allocated with multiple outdoor functions
- +Organic Urban Farm, herb garden
- +Health Fair (temporary installations) outdoors
- +Public Art shows indoors / outdoors (local art workshops)
- +Regeneration of Woonsocket Main Street canals

Most of the above suggested alternative infill building proposals is all small businesses that will attract local professionals, or work force and may attract faculty from RI universities (Roger Williams University – Architecture and Historic Preservation; Johnson and Wales – Culinary Department; University of Rhode Island – School of Pharmacy; and others) to be able to come and work with locals to train younger people of Woonsocket. Some of these centers can function year round, some in three or less seasonal life span. Few of the above can be merged together. It could attract post graduate students, interns for shorter time period, the trainers and faculty for a longer time period of residential stay. As well, the new infill building(s) will have a mix use where upper floors will be reserved for residential use benefiting from the needs of the proposed center(s). The residential need can spill over to upper levels of vacant historic building and improve the quality of life of Main Street. They all will have very visually accessible street fronts, display windows, and the interior spaces which are enriched with exhibition spaces, gift shops; and depending on the size of street frontage, will include variety of stores that will respond to the basic needs of Main Street residences, etc.

As will be seen in the description of possible infill functions (a separate handout), education and training programs establishing community interaction spaces are the focus and part of the sustainable revitalization plan. Supporting functions such as cafes, restaurants, music / art supply shops, workshops, display areas, etc. become natural extension of such educational and training functions. A workshop such as producing glass or ceramics or weaving along Main Street (especially performed by local artists) will be very valuable scene energizing the Main Street corridor.

Along the Main Street buildings can also have outdoor spaces, landscaped areas, and outdoor cafés in front or back of the buildings. Parking at Main Street will also need to be handled sustainably with permeable surfaces. These or some other functions such as small urban functional parks for public art displays, or eco-urban farms can also be proposed for vacant lot(s) in the Main Street. Main Street will all have sustainability features such as use of recycled material in pavements, signage, energy saving lighting, etc. can all be displayed through their physical manifestations.

Therefore, the infill building or the vacant lots for the Main Street will become a learning environment for sustainability, and will act as nodes of community interaction and will impact positively to improve the quality

of life for all. The main objective of most of these proposals is to raise the awareness of the significance of historic and natural resources of Woonsocket and inform people that Woonsocket has an enormous potential to forward their message beyond the boundaries of the Main Street in Woonsocket and can materialize this sustainably via Ecological Urban Revitalization Plan, and the proposed green infill buildings. Therefore, starting with the Main Street corridor, and displaying sustainable and ecological features in the design and planning will create this new vision locally, as learning environment which can attract many to this revived historic corridor and can also support city's economic development plans.

Schedule:

Introduction: Jan.25

A. Research: (Jan.29 –Feb. 19)

1. Site Analysis: (site visits); Due: Feb. 8
 2. Precedent Analysis: Due: Feb. 15
 3. Land use/ infill alternative proposals: Due: Feb. 19
- Review Research: Feb. 19

B. Master Plan: (Feb. 19-March 8)

4. Master Plan (Ecological Master Plan of Woonsocket Main Street. MP Concept / Parti Due: Feb. 22
- Master Plan Preliminary Due: March 1
- MP Development Due: March 8
- Review Master Plan: March 8

C. Urban Design (segments of Main Street): (March 8-March26)

5. Urban design of segments of Main Street with proposed infill project(s) and revitalization (building and open space)
- Selection of Infill / revise program Due: March 19
- Infill Preliminary Parti
- Context Studies / Urban landscape Due: March 26
- Infill Schematic Design
- Review Urban Design: March 26

D. Infill Projects: (March 26-Apr.12)

6. Infill Projects: Plans, Sections, Elevations Due: Apr. 2
- Infill Project Development Due: Apr. 9
- Review Infill Project Apr. 12

E. Revision of Master Plan, Urban Design and Infill: (Apr. 12-Apr. 30)

7. Revised MP, UD and Infill Project Due: Apr. 23

Pre-Final Review: Apr. 30

Final Review: May 7

Course Requirements:

Each phase of the project will be presented with appropriate graphic and written documentation where use of both freehand drawing and computers will be encouraged. The research phase of the project will be conducted as teamwork. Master plan will be conducted as team, the infill proposals as individual work. Detailed requirements for each phase of the project will be given as separate handouts. The dates of submissions / reviews might change due to unpredictable circumstances (Snow Storm, etc.).



Site Analysis

Land Use + Existing Context

Hydrology + Topography

Mapping

Climate + Design Strategies

Vehicular + Pedestrian Movement

Site Analysis

Team 1 - Land Use + Existing Context

The City of Woonsocket was formed in 1871 by the coalescence of six mill villages clustered on either side of the Blackstone River, and incorporated as a city in 1888. The city saw an extraordinary boom period of industrialization that lasted well into the 20th century. The deindustrialization of the Northeast affected Woonsocket, resulting in a net continual loss of population since the 1950s.

Main Street is primarily commercial and mixed-use buildings. No residential properties are found on the first floor, unless grandfathered into the zoning ordinances. These buildings are old mills that were converted into apartment complexes. However, the areas surrounding Main Street are primarily residential and industrial properties. By activating the upper floors of Main Street we could potentially activate the Main Street area.



1. Museum of Work and Culture
2. Lippitt Mill/ Hanora Building
3. Ballou-Harris-Lippitt Mill
4. Buell Building
5. Woonsocket Institute for Savings
6. Providence-Worcester Railroad Depot
7. Old Post Office
8. Stadium Theatre
9. Major Squares



MARKET SQUARE



DEPOT SQUARE



MONUMENT SQUARE

Site Analysis

Team 2 - Hydrology + Topography



When the Blackstone Canal was established, a series of 49 locks carried boats from Worcester to Providence changing 438' in elevation throughout the length of the Blackstone River. Each lock was 80' long by 10' wide. In Woonsocket there are five remnants of the Blackstone Canal [Lyman Arnold, Globe, Market Square, Bernon, and Bartlett] which are still used today.

Throughout Woonsocket there are several existing bodies of water, falls, and rivers which can still be accessed. Three of the major sources are Harris Pond and two reservoirs. There is also the Woonsocket Falls Dam, located by Market Square in downtown, which causes strong currents downstream.

The level of the Blackstone River changes throughout the year; lowest in summer, highest in spring and fall. Interestingly, the water levels have increased between 1940-2005 because of the 11in increase in precipitation annually. Due to city's proximity to the river, the city is prone to flooding; the worst flood was in 1955 and was over 20'.

Unfortunately, the Blackstone River is not currently possible to drink from or swim in. People have been working on cleaning the river and hope to make the water quality acceptable for people to swim in. There are opportunities to make the edge of the river a beautiful area for city residents to use.

The city is built on a series of hills which gives it a quite severe change in grade. The map on the left shows the topographic changes within Woonsocket; each line represents a 3' change in grade. The highest point in Woonsocket is 80' above sea level while the lowest point is 30' above sea level.

The relation of the city to the Blackstone River comes with negative qualities such as heavy pollution, lack of accessibility, and the current condition around the river's edge. The area is home to rundown houses and trash-filled areas. Also, the existing trenches, green spaces, and parking locations are misused and therefore not beneficial to the area nor the inhabitants of the city.

It is recommended that the design teams establish a connection between Main Street and River Street/Truman Drive, to bring people back to the river's edge and activate the parks and green spaces. The topography allows for physical and visual connections between the upper and lower levels surrounding Main Street. Also, there is the potential to bring water back to Main Street through re-establishing the use of former trenches/canals. If planned correctly, one could power Woonsocket with water current, thus cutting the cost of city operations. Ideally, the master plans should aim to revitalize the river's edge and make a walkable area through the establishment of a potential bike or walking path.

Site Analysis

Team 3 - Mapping



Site Analysis

Team 4 - Climate + Design Strategies

It is critical to investigate the natural features of Woonsocket in order to harness the already present sources of energy that the area has to offer. In order to create an environment that is welcoming and comfortable for people to live in, the Main Street outdoor spaces are critical areas to employ natural passive systems of climate control. These systems are not only cost effective, but provide longevity and interest to the area.

Sustainable designs improve reputations and promote innovation in towns. Simply by using subtle shifts and orientations of spaces, and intergrating restorative natural features, a vibrant, healthy street can exist.

The temperature of Woonsocket ranges from 19°F and 34°F in January, and 63°F to 80°F in July. During those time spans the humidity changes drastically with averages of 93% humidity (July) and 37% humidity (April). Another consideration is that Woonsocket averages 133 days of wet weather per year, receiving 51.4 in of rainfall and 36.2 in of snowfall annually. Also, the direction of the wind changes throughout the year. During the summer, the strongest winds are from the west and south versus the winter where they occur from the north.

Based on these factors, much of the year faces uncomfortable conditions for humans; summer being hot and muggy while winter is cold and dry. The most comfortable time during the year occurs from mid-April to mid-June and mid-August through mid-October.

1. The sun's orientation is an important factor in design. Certain months require shading techniques to prevent a building from overheating, which other months can utilize the sun's heat to help maintain a level of human comfort. Overhangs are a good technique to achieve this. An overhang can shade the facade of a building during the hot summer months, while allowing light to enter during the winter months when the sun is lower in the sky.

2. Natural Ventilation is a passive strategy using both wind and temperature differences to cool or ventilate spaces. The benefits from natural ventilation include improved air quality and increased energy efficiency. Adding an active component can enhance the effectiveness of these strategies.

3. Wind tunnels occur when the wind blows through a space that becomes narrower, the speed of the wind increases through the space as a result of the increased air pressure. While this can become a problem in the built environment, it can also be harnessed to benefit an area.

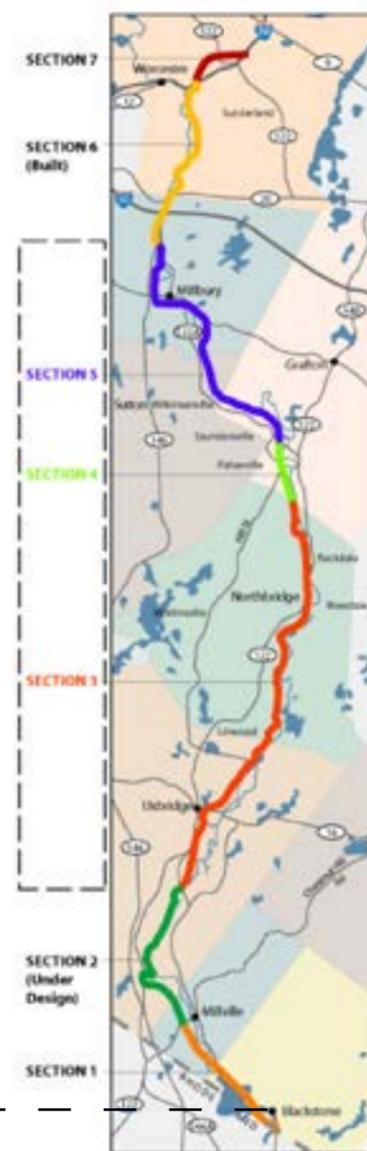
4. The term "heat island" describes built up areas that are hotter than nearby rural areas. Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality. Adding green rooftops will provide relief from the heat island effect, as well as include additional plantings along Main Street.



Site Analysis

Team 5 - Vehicular + Pedestrian Movement

3

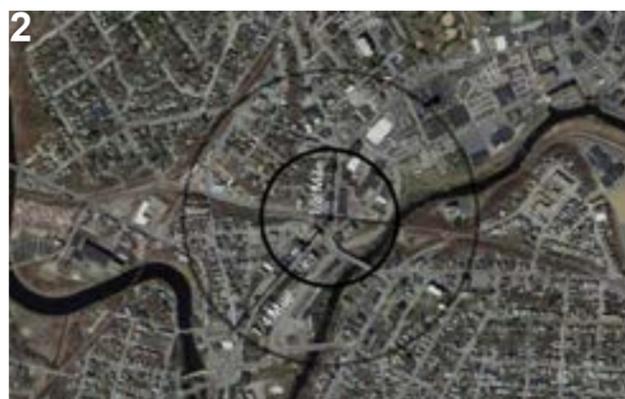


Woonsocket is below Section 1, which is to be constructed by 2014

1



2



Woonsocket, Rhode Island is located in northern Rhode Island and can be accessed by several major highways. These highways include: RI-295, MA-495, RI-146, and I-95. Access to Main Street is primarily from three bridges on South Main Street, Bernon Street, and Court Street. Most of the streets in the area are two ways but there are also several one-way streets which can make travel by vehicle difficult. Based on the site and its relationship to the river, the traffic is significantly heavier going southbound than north. It could be helpful to turn High Street and Arnold Street into two-way roads, which would balance out the traffic and give use to some of the unused parking lots.

1. Rhode Island provides two public transportation buses which frequent Woonsocket: Bus #54 + #87. However, the bus stops after 6:30 PM. Aside from buses, the city has little to no public transit although several railroads once went through Woonsocket. Restoration of existing railway is a viable option to re-establish connections to major cities.

2. The sites in Woonsocket are within walking distance of the existing train station. It would take approximately 3 minutes to walk to Monument Square, 6 minutes to Market Square, and 10 minutes to reach the edge of the Blackstone River.

3. There is also a bike path in creation that goes throughout the Blackstone River Valley. The segment going through Woonsocket has not yet been completed. It is proposed that the bike

path travel along the Blackstone River's edge, continuing up to Truman Drive and Hamlet Road.

Most buildings and lots have ADA access, however some older residence-type buildings have steps as the only main entrances. Lots are not accessible in the direction of the steep grade, as there are only stairs connecting them. Some older lots are not paved and may prove difficult to walk on, however, these lots are not commonly used. Only two buildings off Main Street have ramp access in locations where there is enough space. While there are flat portions of Main Street, those with disabilities may find alleyways and side roads too difficult to ascend/descend due to the steepness.

Main Street has the most pedestrian activity, followed by Market Square. There is also a pedestrian area down the hill from Market Square, around the Truman Drive businesses. Crosswalks are far too long in some of the busier intersections in Market Square making crossing them unnerving. There are not enough crosswalks covering Truman Drive, although since it is a two-lane road, an overpass may be considered. Crosswalks are encouraged to link to historical buildings such as the one next to City Hall.

At times the sidewalk is not wide enough to accommodate those waiting at bus stops. Unused parking lots could be transformed into green space for leisure activity.



Precedent Study

Isabella Stuart Gardner Museum

Gothenburg Law Courts

Hubertus House

Neue Staatsgalerie and Chamber Theater

DZ Bank

Infill Precedent Analysis



Isabella Stewart Gardner Museum Addition - Renzo Piano - Boston, MA

The museum houses the collection of Isabella Stewart Gardner, a patron of arts during the late 17th and 18th century. The architecture of the museum, which she helped design, serves as a physical representation of both her interest in history and the beautification of the historical city of Boston. In looking at Piano's addition, he respected and upheld Gardner's interest in the arts and culture of the city of Boston. Providing approximately 70,000 SF of additional space, the design of the new building sustains the mission of the Gardner Museum, linking Isabella Gardner's historic legacy with contemporary culture by providing new spaces to learn and experience art, music, and horticulture. A greenhouse walkway, surrounded by a grove of trees, connects the existing museum to the new addition. The connection requires minimal intervention to the existing building. The addition respects the height, proportions of fenestrations, and modular facade elements to the existing museum and surrounding context. Brick walls are strategically and gracefully integrated into the modern structure, complimenting and respecting the predominant building material of the area. A copper panel system which is green in appearance aids in disguising the building with the landscaped area. The glass panels create both transparent and reflective qualities. Pulling the addition away from the museum allows natural light to enter the building on the northeast side of the addition. The use of skylights is also beneficial. The buildings placement creates new exterior spaces; pockets of both private and public green spaces.



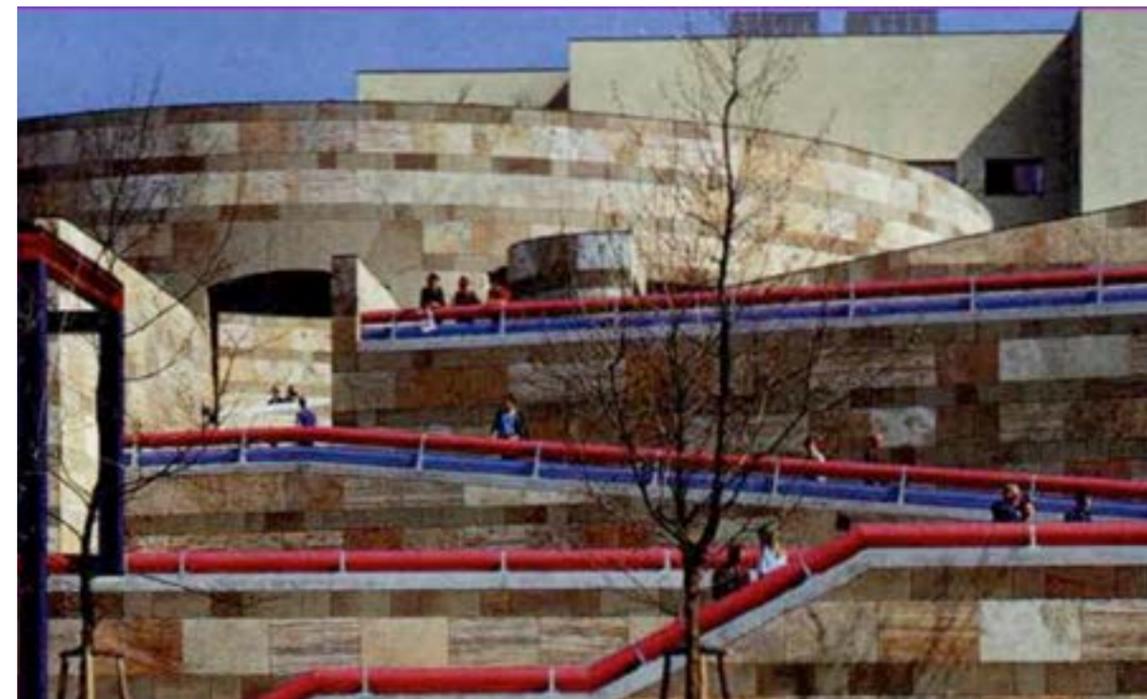
Gothenburg Law Courts Extension - Erik Gunnar Asplund - Gothenburg, Sweden

The original structure was constructed in 1672 by Nicodemus Tessin. The building has a classical design with primary entrances to the south. Over time renovations were made to the building to add a third floor and interior courtyards. The addition went through a series of designs over 21 years before settling on a final design for the facade and the interior. The original facade showed ideas of rationality and romanticism, that Asplund originally adopted but eventually broke away from in the final design. The design continued to adapt based on the development of the courtyard adjacent to the courthouse. The rear facade is consistent with the front facade, but with a greater number of punched openings to take advantage of northern light. The exterior conveys an oppressing neoclassical style which gives a sense of strength, symbol of justice, and respect associated with laws. The interior transitions into a warm, well lit, provocative space that is enjoyable and gives a sense of ease for plaintiffs heading to court. Asplund references Casa del Fascio and the idea of gridded patterns and asymmetrical design. Windows have the same proportions as the existing structure and the columns remain in a consistent patterns. The windows give reference to the size of the interior atrium. The addition is set back from the existing structure and created a subtle, yet noticeable change in facade. Materials and colors from the classically inspired design appear in the new design to give another connection to the past.



Hubertus House - Aldo van Eyke - Amsterdam, Netherlands

The Hubertus House was designed as an apartment complex for single mothers and their children, which is where the name comes from. To maintain a rhythm in the facades, van Eyck mirrored the bay dimensions of the modern building to the left of the Hubertus House and then copied the bay dimension of the house on the right with the last bay creating a void which defines the entrance. This space creates a buffer zone between interior and exterior thus creating the notion of connection and separation simultaneously. While the edges of the building are understandable, there are no specific boundaries to the spaces. The buildings dimensions and proportions allow it to fit in well with the other buildings but stand out through the use of a rainbow of colors. The transparency of the building, especially in the main circulation shaft, visually connects the inhabitant with the other parts of the building. Also, the transparency allows glimpses of the street even from the exterior courtyard, thus maintaining that sense of connection with the city beyond. The program layout also relates the street to the protection of those inside. The offices and parents rooms face the street while the childrens' spaces are located on the interior closer to the courtyard.



Neue Staatsgalerie and Chamber Theater - James Stirling - Stuttgart, Germany

The Neue Staatsgalerie is situated next to the original Staatsgalerie on a slope rising up from the street level. The shape of the slope is retained in the external design of the building by creating a staggered facade. There are three large sloping, curving windows in green, appearing as grassy banks. Then there is the ramp resembling a path working its way down a hillside. The ramps lead you through the internal sculpture courtyard, a ruin-like rotunda with views into the lower part of the museum. The entrance doors are not visible, they are tucked away around the corner, so as not to disturb "the landscape". The building is clearly post-modern in style which can be seen in the fenestration. However, Stirling is able to combine post-modern qualities with classical references. The Neue Staatsgalerie has earned its own identity separate from the original staatsgalerie. The buildings are connected subtly via ramps and bars.



DZ Bank - Frank Gehry - Berlin, Germany

The program includes a bank and residences but the bank is completely shut off from the residences, a smaller vertical atrium with a solid wall separates the two functions. The circulation revolves around the atrium space, with longer corridors at the ends of the offices. The residences share one hallway that leads to two vertical cores. The vertical cores are logically placed at every corner of the offices, and in the middle of the corridors for both offices and residential. Gehry makes an effort to drive visitors into the center of the building via the south entrances. A series of ramps lead up to the monumental conference room, which has the only celebrated stairs. Offices are centered around the atrium providing natural light through the glass roof; a space frame made of 1,500 triangular glazing panels. The bank's main source of light is this large curved glass roof, which is reflected and filtered through Gehry's untamed forms. A separate lightwell illuminates the residences' atrium.



Main Street Analysis

Commercial Life

Industrial Life + Its Manifestations

History + Culture

Social Life

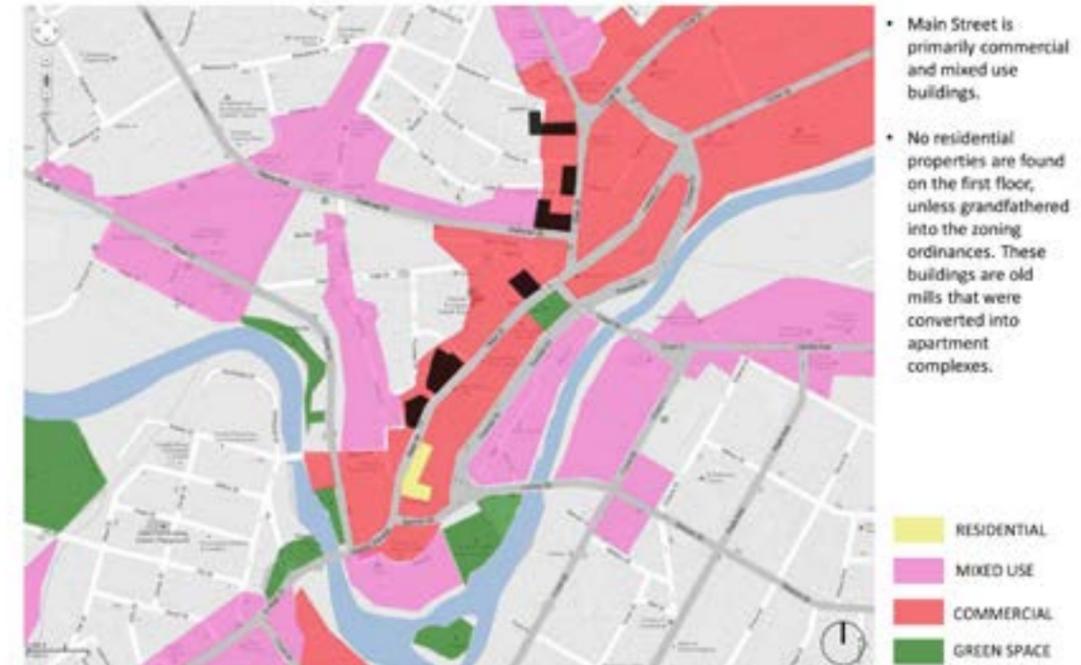
Residential Sustainable Design

Site Analysis: Woonsocket, RI

Land Use & Buildings
Exterior Space & Place Characteristics



Land Use: Zoning - Center



Land Use: Current Zoning



Land Use: Zoning – Periphery



Land Use: Zoning – Environmental



- Wetland areas are found along the Blackstone River in the Main Street area.
- These wetland areas often correspond to green spaces nearby.

■ WETLANDS
■ GREEN SPACE



1 Main Street
Lippitt Mill/Hanora Building

- Constructed in 1865
- Originally Lippitt warehouse and mill building
- Converted into an apartment complex in 1982
- Greek Revival
- 3.5 stories
- Brick with granite trim
- Mansard roof



42 Main Street
Museum of Work and Culture

- Built in 1915
- 2 stories
- Originally a local textile dyeing building for the Barnai Worsted Company and then Lincoln Textile Company.
- Today the museum depicts the life of French Canadian immigrants and their acculturation in American life.



15 Main Street
The Ballou-Harris-Lippitt Mills

- Constructed in 1836
- 3 stories high
- Originally Lippitt warehouse and mill building
- Converted into an apartment complex in 1982
- Set back, allowing Lyman Arnold Trench to flow past
- Greek revival style
- Stone with brick cornice





75 Main Street The Buell Building

- Constructed in 1922
- 4 stories
- Woonsocket's first newspaper was the *Woonsocket Patriot* however, *The Evening Call* was founded by the democrats of Woonsocket in order to juxtapose the Republican *Woonsocket Patriot*.
- *The Evening Call* was a great success and took over the position of the *Woonsocket Patriot*.
- This site was previously occupied by another building which was destroyed in a fire in 1922.
- The current building is brick and granite.



169 Main Street City Hall

- 1856 and 1891
- 3.5 stories
- This was Woonsocket's first commercial building and the first public library in Rhode Island.
- Abraham Lincoln spoke in this building in 1860 and 1889
- It became the City Hall in 1902.

- Italianate style (1856)
- Rugged granite clad addition in the Romanesque style (1891)



136-148 Main Street Woonsocket Institute for Savings

- 1926 and 1964
- 2.5 stories
- This is the oldest bank in Woonsocket which was incorporated into the city in 1849.
- This building was built in 1926 across from the city hall.
- One story
- Neoclassical style
- Indiana limestone



Hydrology and Topography

Woonsocket, RI

Arch 515: Main Street Revitalization

Andres Daza + Matthew Bird



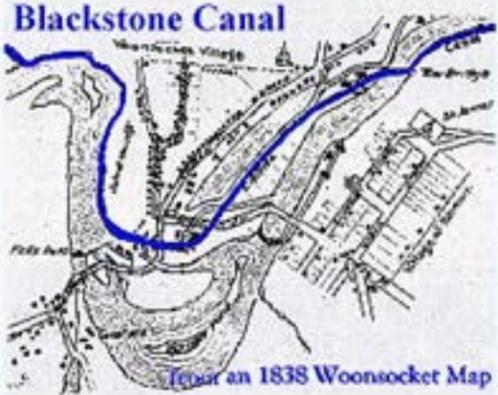
System of Trenches in Market Square

Power Trenches Used	% of H ₂ O Used
+Lyman Arnold	50%
+Globe	25%
+Market Square	19%
+Bernon	44%
+Bartlett	7%

Remnants of Blackstone Canal

Andres Daza + Matthew Bird

Blackstone Canal

from an 1838 Woonsocket Map

Blackstone Canal

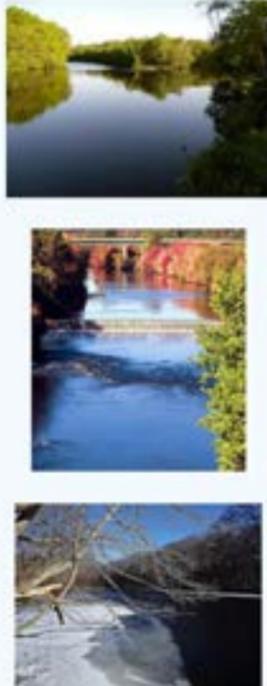
Established _ 1828
 Railroad Established _ 1846
 Abandoned _ 1848

A Series of 49 locks carried boats from Worcester to Providence changing 438 feet in elevation throughout the length of the Blackstone River.

Each Lock was 80ft long by 10ft wide

History of Water + Woonsocket

Andres Daza + Matthew Bird

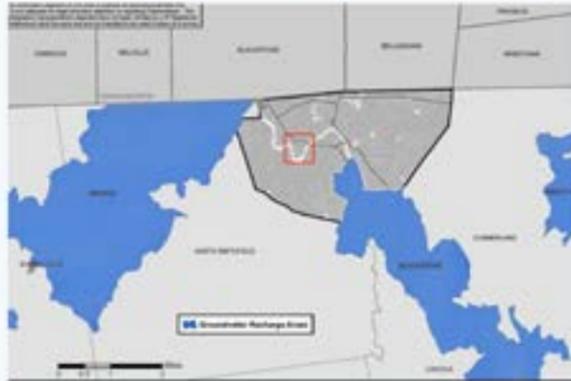
Existing Bodies of Water

Andres Daza + Matthew Bird



Major Sources of Water:

- Harris Pond
- Woonsocket Reservoir #1
- Woonsocket Reservoir #2



Existing Bodies of Water

Andres Daza + Matthew Bird

Dexter Ballou Mill



- ⊗ Original section built in 1836
- ⊗ Greek revival style
- ⊗ Addition by *Lippit Woolen Company* in 1865
- ⊗ Produced **woolen goods** through WW II.
- ⊗ Located at intersection of Main and South Main St.
- ⊗ Converted to apartments in 1982.

George C. Ballou Mill



- ⊗ Stone Structure built in 1846.
- ⊗ Old sawmill lot (now Market Square Pavillion)
- ⊗ Had as many as 200 employees and stood for over 100 years before being torn down in the 1960's.
- ⊗ **Textile Mill** with 16,000 spindles, 252 looms.

Falls Yarn Mill



- ⊗ Located in Market Place Plaza.
- ⊗ Falls Yarn Mill occupied by .
- ⊗ *Woonsocket Rubber Company*.
 - ⊗ Sister company of *Bailey Wringer Company*
- ⊗ Part of one of largest **rubber** companies in the country.
- ⊗ Now restored as restaurant.

Matthew Bird _ Andres Daza

Eagle Mill



- ⊗ Established in 1831.
- ⊗ Large stone mill located between Clinton St. and the river.
- ⊗ **Textile mill** containing 12,464 spindels and 250 workers.
- ⊗ Powered by water from Clinton Pond.
 - ⊗ Produced 175 hp

The Future of Main Street

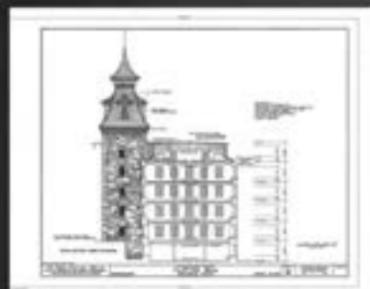
For the revitalization of Main Street we must learn from its rich **industrial history** while also looking towards **future** industries and ways of production.

The following are the proposed industries that could populate Main Street:



- Craft Industries
- Textile and Apparel Industry
- Medical Research/Pharmaceutical
- Aquatic Waste Facility
- Alternative Energy Industry

Clinton Mill



- ⊗ Established in 1849 by *Edward Carrington*.
- ⊗ Operated under trade name *Fruit of the Loom* by 1854.
- ⊗ 5 stories tall, built of stone with large center Tower.
- ⊗ Large **textile mill** with 22,000 spindles, 512 looms and 360 employees.

Craft Industries



Building containing following manufacturers/**specialties**:

- Woodwork
- Steel
- Glass

Working in unison to produce **locally crafted** goods that would ultimately help larger manufacturers in area.

Textile and Apparel Industry



- ⊗ Focusing on improved **fabrics** and new ways of production.
 - ⊗ Seamless Clothing
 - ⊗ Efficient/Eco-Friendly Machinery.
- ⊗ Bringing back **textile heritage** of Old Woonsocket and improving domestic textile business.
- ⊗ Housing **local tailors** and even dry-cleaning services at the commercial level.

Pharmaceutical Compounding and Research



- ⊗ Pharmaceutical **commercial** building on Main Street ground level.
- ⊗ In-house production facility(compounding)
 - ⊗ Process of creating new product to fit unique needs of patients.
- ⊗ Medical **research labs**, investigating ongoing advances in medicinal treatment.
- ⊗ Specialized training and educational programs, bringing **presence of universities** in the area to Woonsocket.

Pharmaceutical Compounding and Research



- ⊗ CVS/ Caremark Corporate **Headquarters** located in Woonsocket Industrial Park.
- ⊗ Housed more than **1,500** employees over the past 13 years.

Solar Aquatic Waste Facility



- ⊗ Current facility in **Weston, Ma.** (one hour from our site)
- ⊗ Only other one in New England, some located in Canada.
- ⊗ Focuses on **Solar Aquatics Systems (SAS)**
 - ⊗ Hybrid activated-sludge/ engineered-ecosystem process.

Solar Aquatic Waste Facility



- ⊗ Building would provide **wastewater service** to local area.
 - ⊗ Commercial businesses: Supermarkets, Restaurants, Banks, Medical Offices, Retail Stores.
- ⊗ Treatment system consists of **Natural Treatment** including:
 - ⊗ Aeration, plant and animal aquaculture, solar radiation, clarification, sand filtration and others.
- ⊗ Also used as **educational tool** for local school classes.

Implementing New Industries



Sustainable Energy Industry



- ⊗ Building would specialize in **clean energy** primarily production of *Solar Panels* and **solar powered equipment**.
- ⊗ Would also conduct **research** on solar and wind energy to have maximum efficiency in products being produced.
- ⊗ Analysis of local water sources could help revitalize water as a major source of energy for the area.
- ⊗ **Real Goods Solar Inc.** located in California serves as a good precedent for this.



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HISTORY & CULTURE

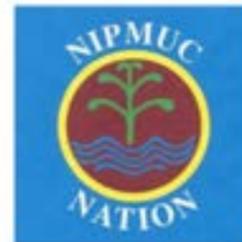
WOONSOCKET, RHODE ISLAND
MAIN STREET

COLBY KARAMELIS
ZACHARY NELSON

ARCHS 15, GRADUATE DESIGN STUDIO
SITE ANALYSIS

HISTORY REGIONAL

- Native American Tribes
 - Nipmucs (Cowesett)
 - Wampanoags
 - Narragansetts



HISTORY REGIONAL

- European Settlers
 - 17th century
 - French and English
- Purchase
 - 1661 by Roger Williams from Nipmuc(Cowesett) Tribe



HISTORY

INDUSTRIAL REVOLUTION

- Water Power
- Mill Villages
 - Woonsocket Falls Village
 - Social Village
 - Jenckesville
 - Hamlet Village
 - Globe Village
 - Bernon (Originally Danville)

HISTORY

ORIGINAL VILLAGES

- Water Power
 - Hand-dug Trenches
- Woonsocket Falls Village
 - Largest Village
 - Market Square Area
 - Proximity to Water
- Social Village
 - City's First Textile Mill
- Jenckesville
 - City's First Stone Mill

HISTORY

ECONOMY

- Social Mill Closed (1927)
 - Largest Producer in Woonsocket
- Great Depression
 - Local Economy Crashed
 - Local Textile Industries Closed
- WWII
 - Large Boost in Fabric Manufacturing
- Current Production
 - Manufacturing
 - Retail
 - Technology
 - Finance

CULTURE

COMMUNITY

- Pre-English Settlers
 - Native American Tribes
 - Nipmucs (Cowesett)
 - Wampanoags
 - Narragansetts
- French-Canadian Influx
 - Mill Working Families Recruited from Quebec
 - 1840s
 - Lasted for almost a century
 - 1900
 - 60% Population is French-Canadian
 - Today
 - Still the Largest Ethnic Group in Woonsocket

CULTURE

COMMUNITY INFLUENCE

- Language
- Religion
 - L'Eglise du Precieux Sang
- Cuisine
- Sports
 - Hockey
 - Lacrosse
- Holidays
 - New Year's Day Jan. 1
 - Good Friday Friday before Easter
 - Easter Monday Monday after Easter
 - Victoria Day May 24
 - Thanksgiving Second Monday in Oct.
 - Remembrance Day Nov. 11

MAIN STREET

- Mostly constructed around mid 1800s
- Became core of urban area
- National Registry of Historic Places 1991
- Includes:
 - Stadium Theater
 - Museum of Work & Culture
 - Various mills
 - City hall
 - Woonsocket Institution for Savings



STADIUM THEATER

- Funded by local industrialist_Arthur Darman.
- 1926_beginning of construction
- 1976_placed on Registry of Historic Places
- 1990_due to decrease in popularity it was shut down
- 1991_funds were raised for renovation
- 2001_fully renovated



MUSEUM OF WORK & CULTURE

- Opened in October 1997
- Operated by the Rhode Island Historical Society
- French Canadians leaving the field for New England Factories
- Preservation of their faith, language and customs



CITY HALL

- Oldest section built in 1856 _Edward Harris
- 1889_addition was constructed
- Italianate & Richardsonian styles
- First major commercial building
- First Public Library in Rhode Island
- Became city hall in 1902



DESIGN

CULTURALLY INFLUENCED ACTIVITIES

- Cuisine
 - Cooking Classes
 - Food Tasting
 - Wine Tasting
- Sports
 - Hockey
 - Lacrosse
- Holiday Celebration

DESIGN

CULTURALLY INFLUENCED PROGRAM

- Sporting Fields / Rinks
- Dining Establishments
 - Traditionally Lunch & Dinner
- Museums
- Retail Outlets
- Culture Centers

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It is important to analyze the existing Main Street in order to better understand what is needed and who the target use groups are. We have focused on the social, health, and education aspects of Woonsocket's Main Street, and we will propose strategies to strengthen these areas.

Woonsocket, RI

Main Street Analysis
Rebecca Sargent & Jessica MacDonald

Health

YMCA



YMCA - Currently offers services to the Woonsocket area. In 2012 Pawtucket YMCA absorbed the building and staff in order to keep the programs in the Woonsocket community, as they were at risk of closing the building. The addition of outdoor recreation spaces could aid the programs as well as provide community use outside of operating hours.

Social autumnfest



Autumnfest – One of the towns yearly celebrations, the largest annual celebration. It includes a range of local groups. Utilizing the main street for parades, they set up tents for covered outdoor spaces. These types of events may be aided by protected exterior spaces for people to gather. These spaces could be utilized by the community day to day in inclement weather.

Education beacon charter high school for the arts



Beacon Charter High School For the Arts is located on Main Street in close proximity to the YMCA and the Stadium Theater. These three establishments potentially create an education zone that could be aided by a functional outdoor space or adjacent education facilities.

Proposal main street shuttle



Health establishments include CVS headquarters, a privately owned physical therapy location near the market square, and a senior services center across from the post office. These are located on opposite ends of the site, so they could be aided by a small shuttle system for senior citizens and handicapped individuals.

Extensive change

Successful downtowns attract a wide range of individuals by affecting housing, work, shopping, culture, entertainment, government, and tourist attractions (Robertson 1995).

Downtown revitalization should include not only new housing and commercial businesses, but also after-school programs, anti-crime initiatives, youth development and employment services, arts, recreational opportunities, and public transit.



Public Spaces

Maintain and develop genuine public spaces. Downtowns with fewer sidewalks... traffic, and... "dead spaces" ...parking lots, highway ramps, and vacant buildings... result [in discouraged] pedestrian activity and public gathering in many cities.

Careful planning through widening sidewalks, encouraging mass transit, and landscaping can encourage "on-street" activities such as commerce and dining and widen the public sphere, promoting community (Robertson 1995).



Proposal

activities for every age group



More physically engaging activities for all generations will foster better health and higher spirits, as well as connecting community members. In order to incorporate these activities into the community, programs have to be established and space for the programs to occur must be available. We suggest creating flexible exterior spaces and central community indoor spaces.

Existing Public Gathering Spaces

YMCA, City Hall, Health Services, Charter School, Churches, Museum, Mini Park, Senior Center



Proposed Additional Public Spaces

"Pedestrian Pockets"
- Community Garden (s), Park Spaces, Roof Gardens, Gathering Spaces, Athletic Courts, Children's Museum, Child Care Facilities, Community Building



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RESIDENTIAL SUSTAINABLE DESIGN & Infill Proposals

JASON WAINOR + AMANDA O'MALLEY

Residential Sustainable Design

Rainwater Harvesting

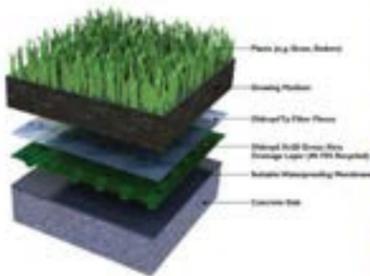


Urban Gardens



Residential Sustainable Design

Green Roof

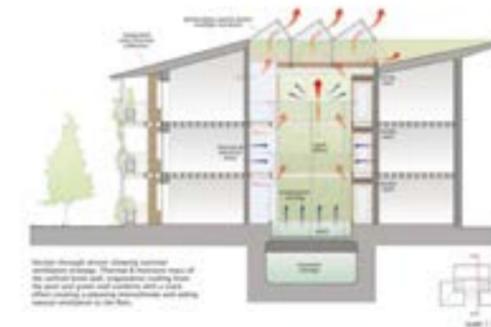


Vertical Green



Residential Sustainable Design

Courtyard/ Atrium



Permeable Exterior Materials



Residences: Existing

- Live/Work
- Business Only
- Full Residence



Residences: Site 1



-Large area, can be divided into many lots

-Residences on south and west side

-One of the only grassed areas: potential for open space park

-Faces Monument Square

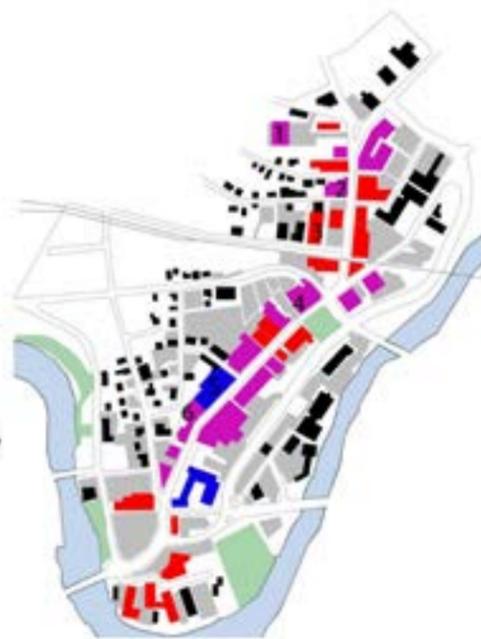
-Recessed and private space



Recommendation: Small residence live work or eco-community based on the private location.

Residences: Proposed

- Live/Work
- Business Only
- Full Residence



-Most of the sites should be mixed use to bring more businesses back

-Sites 5 + 6 are in between busier areas, so a full residence is possible

-The large area of Site 1 can be transformed into a park/community center with residences (possible eco-community)

Residences: Site 2



-Next Beacon School

-Across from YMCA

-Between two streets (not infill)



Recommendations: Mixed use for potential bed + breakfast, art galleries below in relation to Beacon Arts HS

Residences: Site 3



- Across the street from Chan's Restaurant
- Next to railroad street/railroad
- In front of vacant building
- By RIPTA bus stop, busy intersection, noise from train

Recommendation: Work/live unit due to unfavorable location, or no residences

Residences: Site 5 + 6



- Where RIPTA 57 stops
- Residential behind
- Large parking area suitable for hotel/apartments
- Next to small shops and cafes



Recommendation: Full housing or hotel

Residences: Site 4



- Across from City Hall + open park
- Next to high rise live/work
- Connection to back lots
- Intersection has traffic backup

Recommendation: Live/work residences with paths to parking lot on other side



CONCLUSIONS

South of Main St. Primarily Residential

Live work communities or fully residential units

Commercial at ground level and units above

North of Main St. Primarily Commercial

Mixed use buildings with commercial and businesses' above



Team 1

MAIN STREET REVITALIZATION, WOONSOCKET, RI INFILL PROJECTS



SENIOR CENTER FOR THE ARTS

Program: Cafe / Gallery Space
Classroom Spaces for Senior Arts
Private & Public Garden Spaces

Land Use: Civic

Zone: Arts

Role: This building is meant to activate the northern section of Main St near Monument Square, engaging seniors in the arts as well as providing a cafe space for the public. The cafe space will be especially beneficial to Main St. after shows at the Stadium Theatre, directly across the street.

Sustainability: Roof gardens for stormwater management
PV Panels
Permeable Surfaces on public plaza

WOONSOCKET TEXTILES & YMCA PLAYGROUND

Program: Store for the sales of locally made art supplies, textiles & costumes
Studio space for textile production
Studio space for the Beacon Charter School costume design
Storage for Beacon / Stadium Theatre

Land Use: Retail

Zone: Arts

Role: Complimenting program elements that are already successful in Woonsocket, this building hopes to provide support space for the Beacon Charter School and Stadium Theatre. This new building also hopes to involve several groups of demographics - both students and adults who have an expertise in textiles; also hoping to involve community groups in the city. A majority of the site is dedicated to a park for the YMCA.

Sustainability: Rain gardens integrated into the parkscape
PV Panels
Permeable Surfaces on public plaza

RENTABLE RETAIL SPACE

Program: Two modern storefronts for future retail tenants

Land Use: Retail

Zone: Business

Role: Adding to the business area of Main St, two modern storefronts with ample parking in the back. Priority will be given to Woonsocket business owners to help promote the city's economy.

Sustainability: Green roof for stormwater management
PV Panels
Permeable Surface parking



WOONSOCKET CENTER FOR INFORMATION & TOURISM

Program: Information Center
Bookstore
Cafe
Classroom & Meeting Spaces
Storage for Beacon / Stadium Theatre

Land Use: Civic

Zone: Business

Role: This building is crucial to the revitalization of Woonsocket's Main Street. Meant to provide information for residents and those visiting Woonsocket. This building would provide specific information for the homeless, potential business owners, students, potential renters, etc on where to locate different resources in Woonsocket. The building also has public amenities including a bookstore, meeting spaces, classroom spaces and a cafe. The meeting space has the capacity to be rented out, providing economical support for the city.

Sustainability: Rain gardens integrated into the parkscape
PV Panels
Permeable Surfaces on cafe plaza & parking
Occupiable green roof

JOHNSON & WALES CULINARY CENTER & APARTMENTS

Program: Restaurant & Kitchen
Bakery / Cafe / Grocery Store selling J&W goods made on site
Student Kitchen & Classrooms
Market Rate Apartments
Single Room Occupant Apartments w/ Common Kitchens & Bath
Two level underground parking garage

Land Use: Civic

Zone: Cultural

Role: A satellite program for Johnson & Wales Culinary program will add an interesting destination to Main Street as well as involving college students and interns in the revitalization of Main Street. A bakery and small grocery store will also be available to the public selling goods created by students. This building will house classroom spaces & kitchen facilities for students. Above the ground level, three floors of housing will help to create a housing mix on Main St. Market rate apartments and SRO housing will cater to many demographics; a portion of the housing will be used for homeless housing.

Sustainability: Occupiable roof garden for stormwater management
PV Panels
Permeable Surfaces parking
Occupiable green roof

URBAN ECOLOGY CENTER

Program: Main Gallery Space
Exhibits: permeable surfaces, stormwater management, green roof construction, PV panels, geothermal energy, Blackstone River
Classrooms & Lab, Conference Room & Offices for Blackstone River Conservation
Three Intern Apartments
Community Gardens / Urban Farm

Land Use: Civic

Zone: Cultural

Role: This building is meant to educate individuals of all ages about the sustainable features of an urban landscape focusing on building systems, energy conservation, use of exterior spaces, urban garden, and building materials. This site also house a large exterior public park with a terraced garden for community use intended to farm produce for those in the community.

Sustainability: Rain garden for stormwater management
PV Panels
Geothermal HVAC

Team 2

The masterplan proposal for the Main Street revitalization project in Woonsocket, RI introduces the idea of connectivity between different areas of Main Street. The conceptual idea of four nodes begins to achieve this connection of open social spaces, starting from Market Square terminating at Monument Square. Sculptural elements are added to give the nodes consistent visual connection while having specific characteristics that reflect the immediate surroundings. To react to the static environment surrounding these nodes, green spaces are created or revitalized to provide destinations that begin to activate the community.

In conjunction with the previously mentioned green spaces that help activate Main Street, the idea of adding a green wall adjacent to Truman Boulevard would enliven a currently “dead space” in town. This green wall would begin to connect Main Street and the areas surrounding the river’s edge. With the current parking issues on Main Street, the green wall provides an opportunity for more appropriate parking zone that’s more aesthetically pleasing.

The presence of the historical canals on Main Street inspires the reintroduction of water passing through the downtown area. Utilizing the pre-existing trenches would facilitate the creation of a new canal that would pass through Market Square. The new canal would provide a better quality of life for pedestrians through sensory engagement, and begin to give Market Square a new identity.

Pedestrian engagement should not be limited to the Main Street area but should also be present along the river’s edge. With current revitalization of the Blackstone River the addition of pedestrian

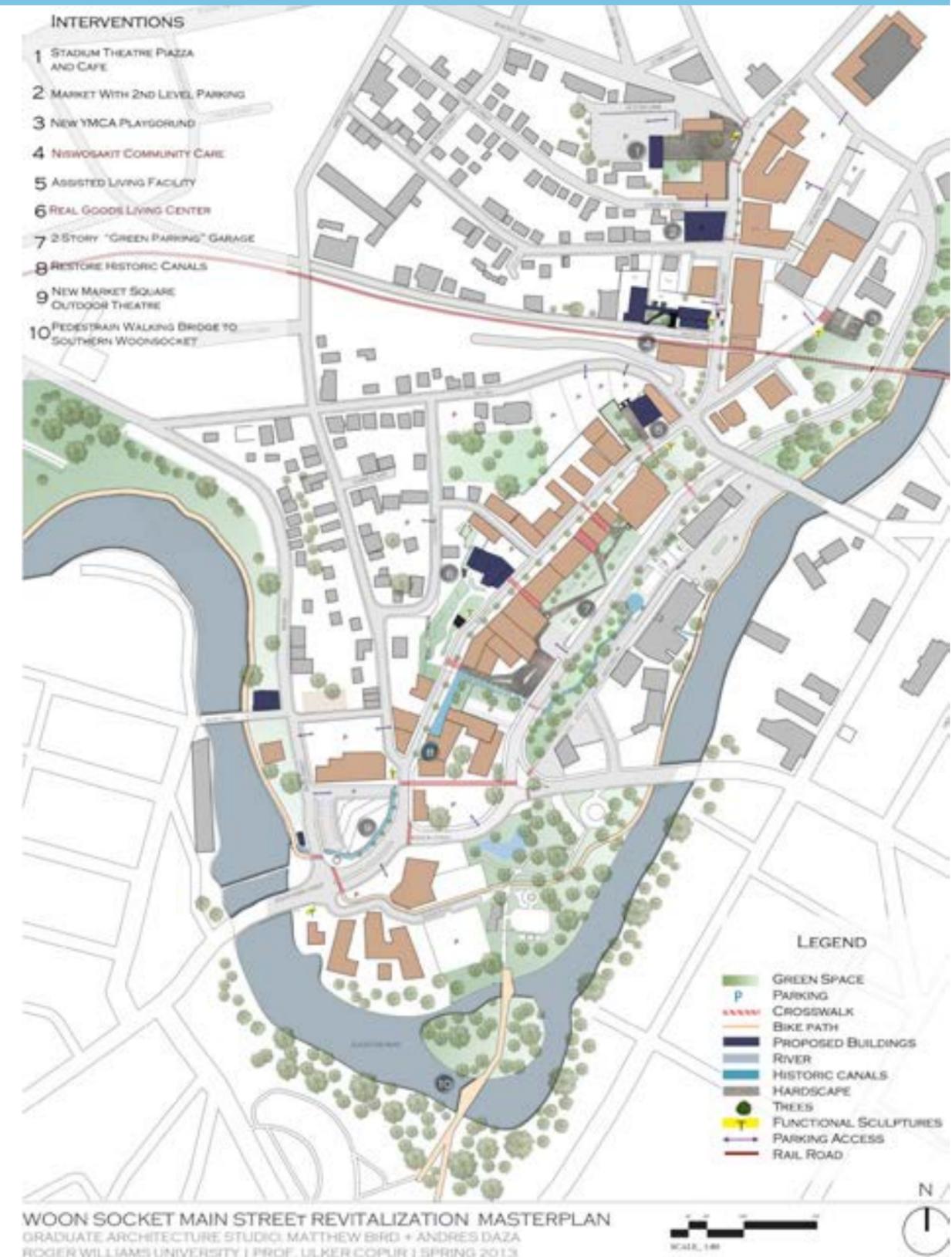
friendly features is necessary to enrich the river’s edge. Creating a bike path between the river and a series of park-like green spaces would begin to draw residents to downtown.

The topography offers an ideal situation for the infill sites to address current drainage issues. Programmatic development could support drainage solutions solutions would ultimately create a cleaner Woonsocket.

The overall concept awakens the potential of visual and physical connections between different sections of the downtown Main Street area. This which could re-establish community connections amongst the diverse cultures of Woonsocket, allowing the continuing development of the city for future generations.

Primary Goals

- Establish nodes along Main Street
- Provide a pedestrian connection from the Main Street to the Blackstone River
- Restore historical canals along South Main St.
- Solve parking issues around the area
- Bring new industries to Main Street that enrich and help the Woonsocket



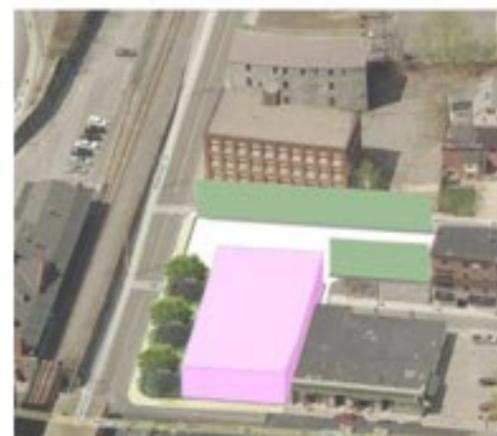
Team 3

While analyzing the Main Street of Woonsocket, Rhode Island, we realized that there were many issues that plagued the area and took away from the allure of Main Street. The Main Street has little ties to the once great historical past, a largely undeveloped commercial center, severe lack of developed green space in the public realm, and no activities to draw people from surrounding areas to the Main Street. In short, there is no reason to be in the Main Street area. It has devolved from a successful hub of activities and businesses to a crumbling skeleton of its former self.

This analysis has led us to the conclusion that a more developed public realm is required to revitalize the Main Street area. Starting with the major traffic nodes which act as entries for Main Street; they were deemed as points of highest revitalization. We want to decrease the feel of vehicular presence and increase the pedestrian access as well as create an inviting public realm. With these nodes revitalized, we would then be able to draw people into the Main Street by creating a green belt which would consist of planting trees along the street and creating an area for pedestrian traffic. This belt would connect the new areas that we are developing, allowing each site to work together as a cohesive whole.

Our ideas for the sites would connect the Main Street in its entirety and allow for the addition of public parks and community support centers dealing with medicine and sustainability. The increase in pedestrian traffic and public spaces would allow for businesses to thrive, decreasing unemployment rates and increasing the attractiveness of Main Street and Woonsocket as a whole.

These nodes are the main gateways in to the Main Street area. Revitalization of these nodes is crucial to bringing life back to Main Street. Methods for revitalization include: increased plantings, different paving materials, addition of statues/ monuments and water features.





Team 4

Creating a more sustainable environment improves both the well-being of the community as well as bringing innovative programming and new resources into an area. Downtown is a place where people of all different ages, heritages, and backgrounds come together. A successful downtown educates and inspires as well as entertains. With the ongoing effort to clean up the Blackstone River already in place, Woonsocket has the potential to establish itself as a leader in sustainable education and viable economic growth.

A healthy environment that utilizes local urban ecologies will positively impact the health and well-being of the community. It is important to create an environment that will foster understanding and inspire learning about native plants and animals, how to care for them, and how to protect them.

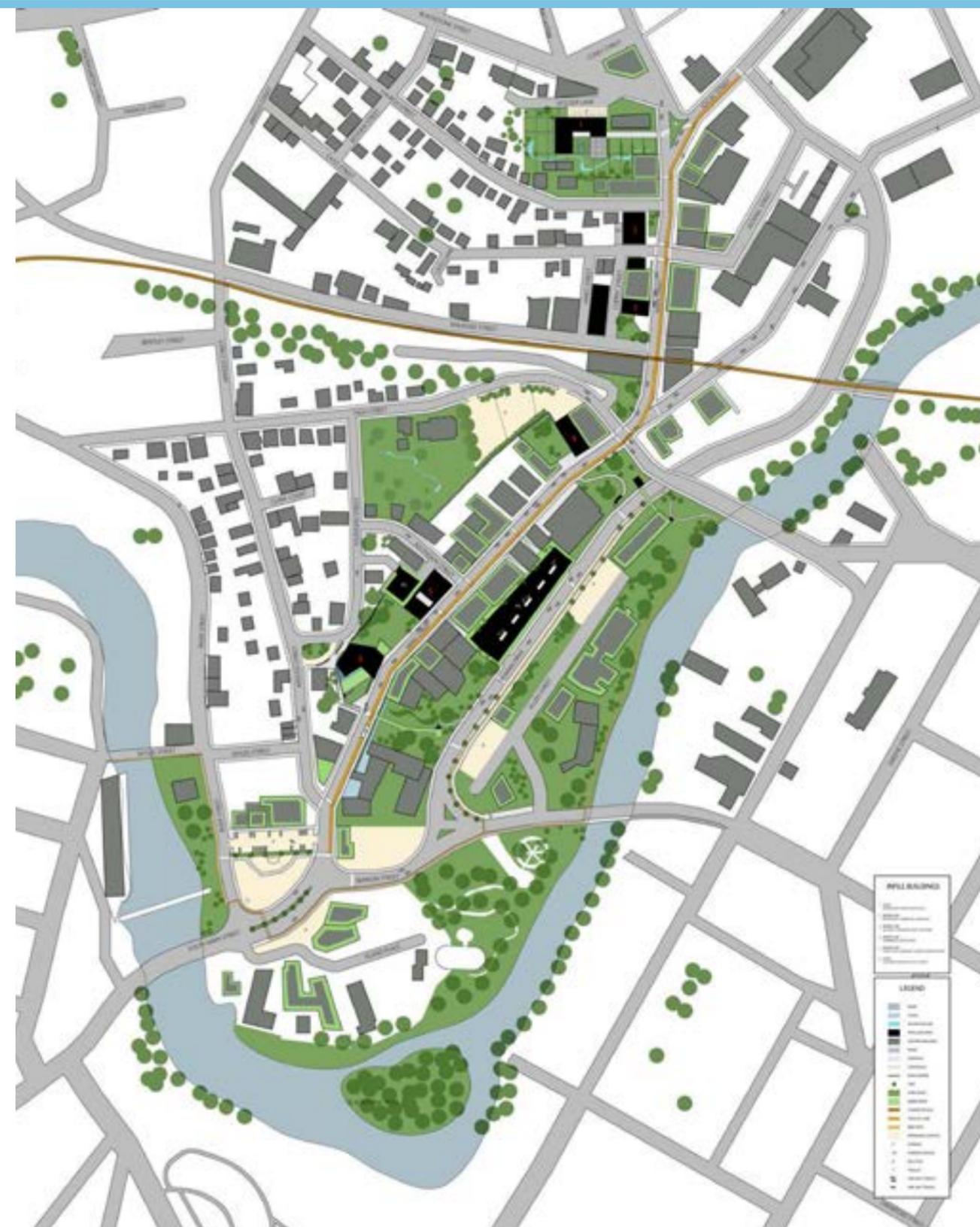
This master plan for downtown Woonsocket focuses on: creating increased public open spaces and public attractions in the downtown area to both bring more visitors in, and to create a happier, healthier environment for the residents of the city. The focus concentrates on six main goals:

1. Circuit of Green Spaces
2. Activate Southern Main Street
3. Concentrated Public Parking
4. Sustainable Transportation
5. Establish Connections
6. Truman Drive Intervention

This proposal includes a children's museum and youth center with after school programs and public weekend classes, a park space with river overlook, a larger public space at Monument Square for festivals and markets, and a rejuvenated park along the Blackstone River Dam. This will enliven the southern portion of Main Street and provide greatly needed services to the community of Woonsocket.

Three vertical parking structures tie into the green circuit with vertical green walls for aesthetics and sustainability along with planted green spaces to aid water management. Each has a capacity of 35 vehicles for smaller structures, and 200 vehicles for the larger structure. They will be placed centrally to be within walking distances of all points along Main Street. The largest is located along Truman Drive with pedestrian access directly onto Main Street. Three horizontal parking lots along Main Street are to be redone with more greenery and permeable surfaces to aid in the reduction of runoff and pollution.

The plan also completes the commuter line running through Woonsocket. This allows for residents to commute for work, for tourists to visit the city, and for the reduction of parking needed for the Stadium Theater. One on-street parking lane will be converted to a Main Street trolley that runs from Monument Square to Market Street. This helps to activate all sections of Main Street in all weather conditions while making it accessible to all age groups.



Team 5

The primary goals of this proposal is to focus on connections to the river, revitalizing businesses on Main Street, and providing green space to make Main Street more enjoyable.

Secondary goals include: improving traffic, providing solutions to parking, and creating pedestrian spaces adjacent to Main Street to better the downtown area.

The abstract model shows an implementation of a “green grid”, this grid allows us to begin to organize the downtown area and provide areas of interest at the intersections of the gridlines.



Connections to the River

1. Provide overpasses and new pedestrian walkways to connect movement from Main Street to the river's edge.
2. Provide proper ADA access via elevators or large ramps.
3. Provide visual connections.

Photovoltaics and Green Roof Potential

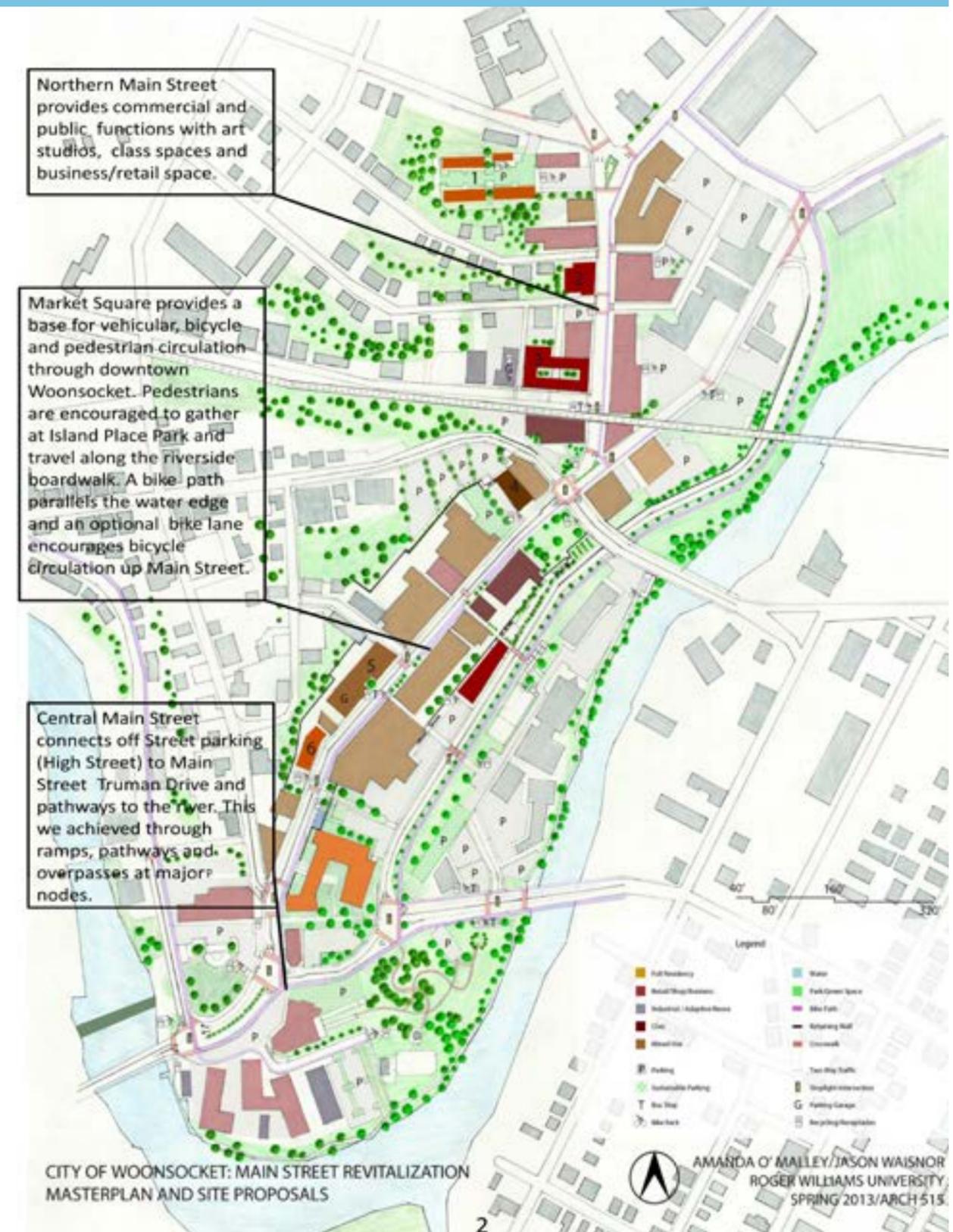
Higher buildings have better success for photovoltaic installation whereas lower buildings are better off with green roofs to help liven the area and views. Suggestions were determined by building height and existing parapet to shield green roofs and photovoltaic panels.

Bike Path

The planned bike path will go down along the river and up Truman Drive. An additional bike path will go through Main Street and reconnect at the northern intersection of Clinton and Truman Drive.

Vehicular Traffic

Based on observation, certain roads are being underutilized. If Arnold Street and High Street are two-way traffic, then this simplifies movement to municipal parking off Main Street, and provides more options to people passing through. Portions of Main Street's sidewalk will bump out to create public nodes. This would eliminate on street parking in select areas.





Design Guidelines

Zoning

Building Form

Surface Materials

Facade Elements

Green Elements

Sustainability

Design Guidelines

Zoning

Screens/Fencing

Fences are allowed in Mixed Use zoning areas. Front yard height should not exceed 3'-0", side yard 4'-0" and rear yard 6'-0". No fences are allowed in the front yards of commercial zones.

C1 Districts Ordinances

Urban Commercial District, primarily for the conduct of retail trade, administrative and professional services and service to the general public.

Minimum lot area of 6,000 SF
Maximum floor/area ratio of 2

Setbacks

Front = 0' from street (Must sit directly on street front)
Side = Minimum 0' from lot line
25'-0" from residential zone
Rear = Minimum of 25'-0" from lot line

Height & Number of Stories

No building should exceed 5 stories or 60'-0" in height unless each side yard is increased over the min. setback requirement by 10'-0" for every additional story.

Use

No residential use on the ground floor,

however they are permitted on all upper floors.

C2 Districts Ordinances

Major Commercial District, Primarily for the conduct of retail trade and service to the general public.

Minimum lot area of 6,000 SF
Maximum floor/area ratio of 0.4 unless 25% or more of the lot area is preserved as natural open space, then ratio becomes 0.5.

Setbacks

Front = 20' from street
Side = Minimum 0' from lot line
25'-0" from residential zone
Rear = Minimum of 25'-0" from lot line

Height & Number of Stories

No building should exceed 5 stories or 60'-0" in height unless each side yard is increased over the min. setback requirement by 10'-0" for every additional story.

Use

No residential use on the ground floor, however they are permitted on all upper floors.

MU-1 Districts Ordinances

Mixed Use Commercial/Residential District, primarily for the purpose of providing

day-to-day convenient shopping needs, administrative and professional services, with an emphasis on daily necessities for the immediate residential area.

Lot Area

Minimum of 6,000 SF for residential & nonresidential use.
An additional 4,000 SF for each additional unit on the same lot.
Maximum density of 10 dwelling units per acre.

Lot Coverage: 35% max

Gross Floor Area

For nonresidential use, 5,000 SF max per establishment.

Setbacks

Front = Conform to existing building line
20' from street w/ no precedent
Side = Minimum 10' from lot line
Unattached buildings, min 5' from lot line
Rear = Minimum of 25'-0" from lot line
Unattached buildings, min 5' from lot line

Height

No building should exceed 30'-0" in height unless each side yard is increased over the min. setback requirement by 10'-0" for every 5' of additional height.
No building should exceed 50'-0" in height.



Design Guidelines

Building Form

- Provide differences in façade articulation including heights, materials, or color between buildings to clearly articulate changes in program and ownership.
- If buildings need to be connected, bridge or connect in a non-invasive manner.
- If a building directly abuts the neighboring building, an additional space or a portion of the new building must be provided to that neighboring building. In future design interventions, new buildings that directly attach to existing structures will provide shared space for both new and existing buildings.
- Corner buildings should hold the edge and complete the street. It should apply to zoning guide lines. They have two main facades located on the street front which need to be addressed.

Surface Materials

- Existing buildings along Main Street vary in materiality and color. New interventions must remain respectful to the existing buildings, perhaps by using more modern materials while maintaining the historical color palette.
- Use groundcover that provides texture and interest to the streetscape.

Precedents



Woonsocket



Façade Elements

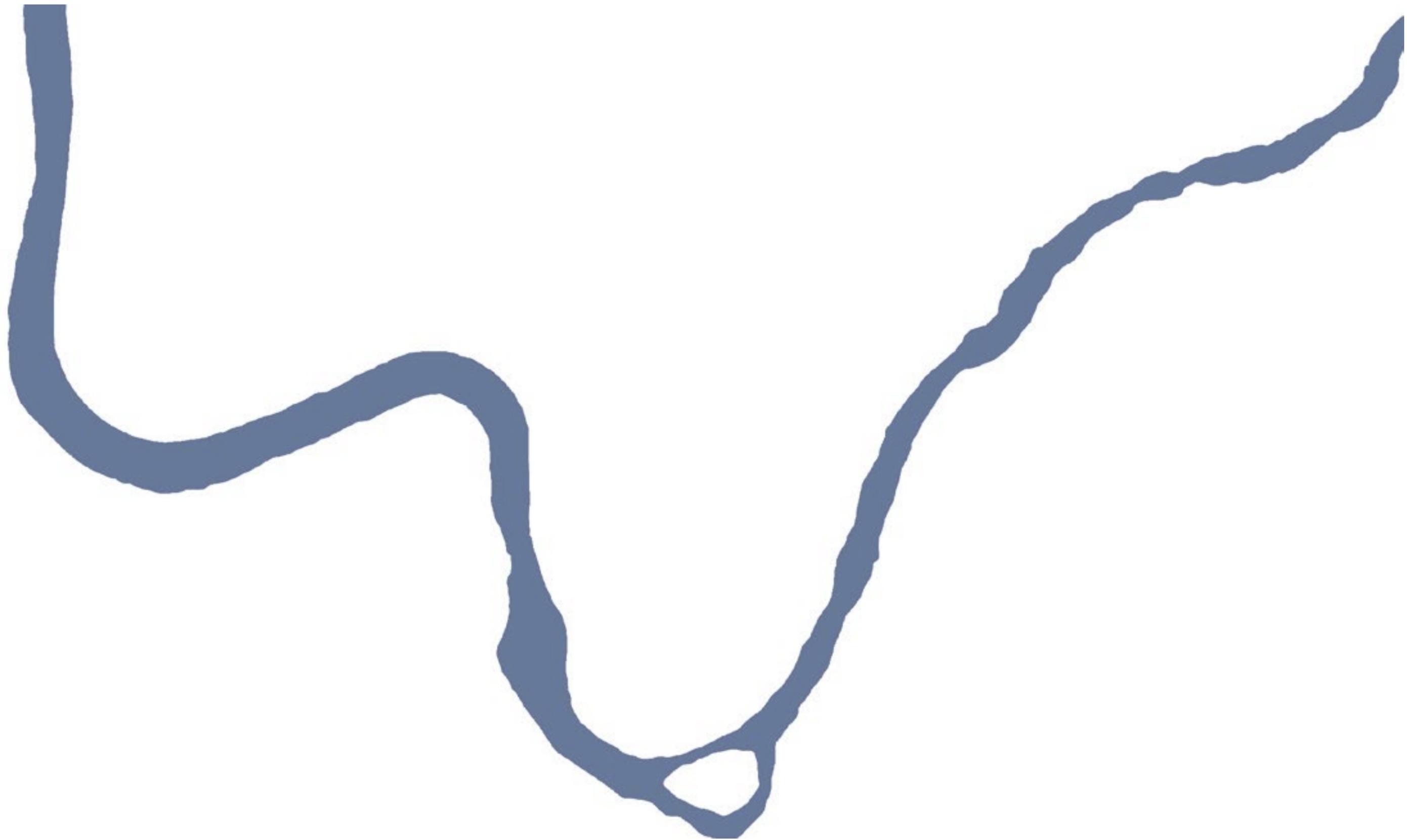
- Continue the lines from the historical facades, such as cornice elements.
- In Woonsocket, not all buildings are the same height but window lines are consistent.
 - End at building level
 - Façade elements line up
- Provide a change in façade from the first to upper floors – the ground floor remaining open and glazed while using windows/openings on the upper floors.

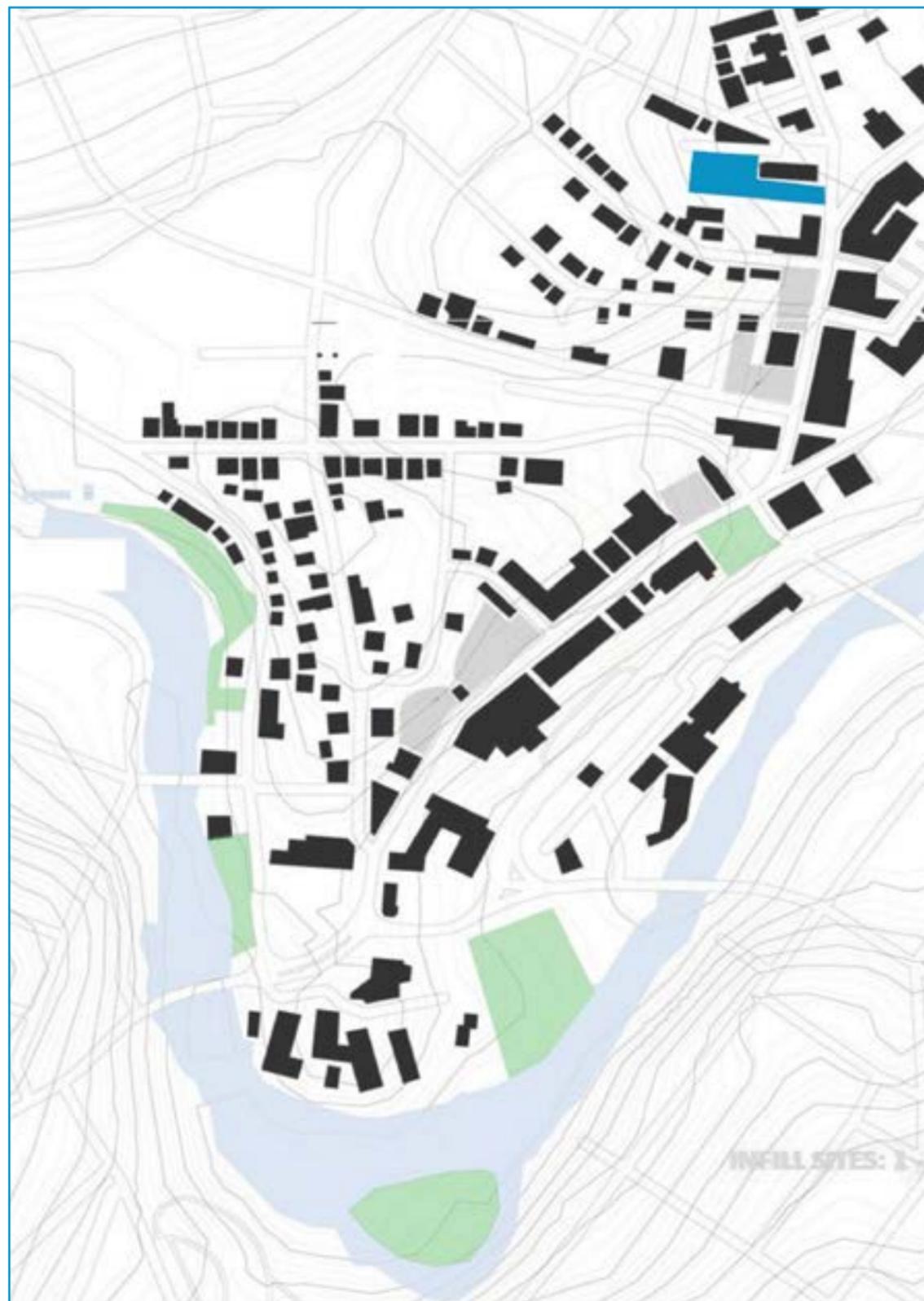
Green Elements

- Green roof surfaces should be used to help reduce heat island effect and for storm water management. Because of the elevational changes in Woonsocket, green roofs are more visually pleasing.
- Utilize greenery in parking strategies.

Sustainability

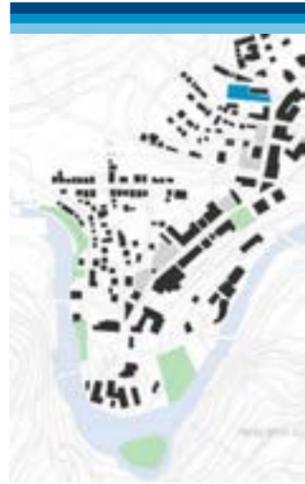
- Utilize solar panels when possible.
- Promote non-vehicular travel.
- Incorporate bike racks into urban furniture design.
- Incentive for hybrid / electric car parking.
- Utilize recycled materials when possible
- Incorporating rain gardens into public and private green space.





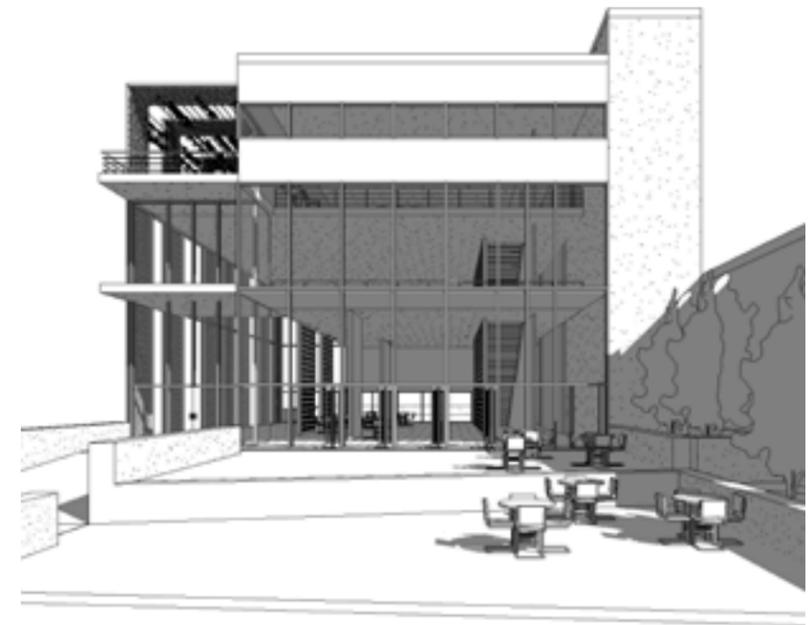
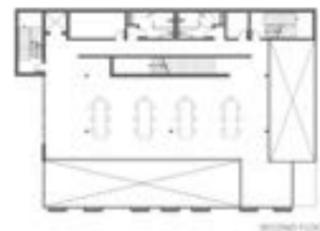
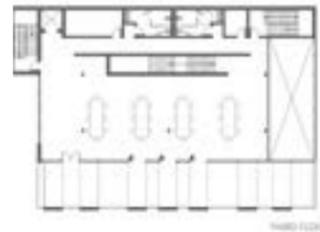
Site 1

2 Monument Square, Woonsocket, RI



Senior Art Center

Site 1 - Team 1 - Emily Regner



Program: Cafe/ Gallery space, classroom spaces for senior arts, and public and private exterior garden space

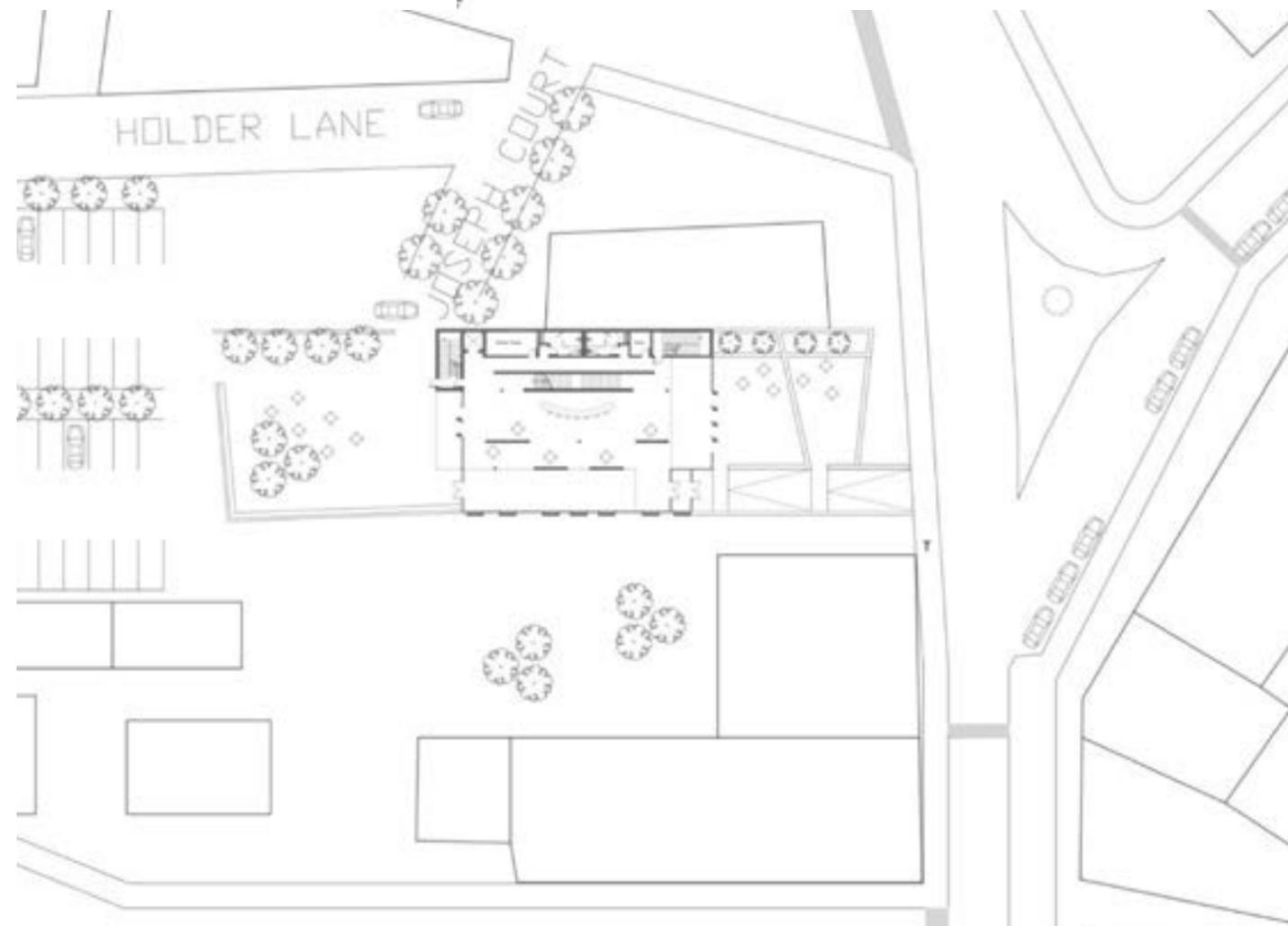
Landuse: Civic

Zone: Arts

This building is meant to activate the northern section of Main Street near Monument Square, engaging seniors in the arts as well as creating cafe space for the public. The cafe space will be especially beneficial to Main Street after shows at the Stadium Theater, which is located directly across the street.

Senior Services Inc. is located north of the proposed art center. It is anticipated that seniors involved with Senior Services Inc. can take day trips to the new art center. While visiting, they will have the opportunity to participate in art classes, view the exhibits of work done by other artists in the community, attend art demonstrations, and enjoy the cafe on the lower level. Travel between these two buildings is made simple because both have a bus stop in front of them. Seniors will not have to walk a long distance. While visiting the art center, seniors may be more likely to populate the more southern portions of Main Street.

Sustainability: gardens for storm water management, permeable surfaces of exterior plaza space.





Woonsocket Center for Ecology

Site 1 - Team 4 - Rebecca Sargent

Ecology center with an emphasis on water quality of the Blackstone River as well as the watershed it is located within. A place for learning and collaborative study, as well as spaces for gathering and special events for the general public. The park on the front of the site is a multi-functional space that could serve to the theater across the street in order to give patrons a place to relax and enjoy the outdoors before or after a showing as well as become a space for special events.

Limited parking is located on the north side of the building, however a newly proposed parking structure is located within a 2-3 minute walking distance from the building. It is also located just across the street from a RIPTA stop.

Program: A living machine, an auditorium, a gallery, four classrooms, a cafe, an outdoor classroom, and an urban garden

The living machine occupies 3,000 sq. feet of the building and processes an average of 9,300 gallons of sewage per day and peaks at 1,600 gallons per hour. It provides waste treatment that is both more aesthetically pleasing as well as being unnoticeable to detect by smell, unlike conventional waste treatment facilities. Located on axis with Main Street, the living machine is the focal point

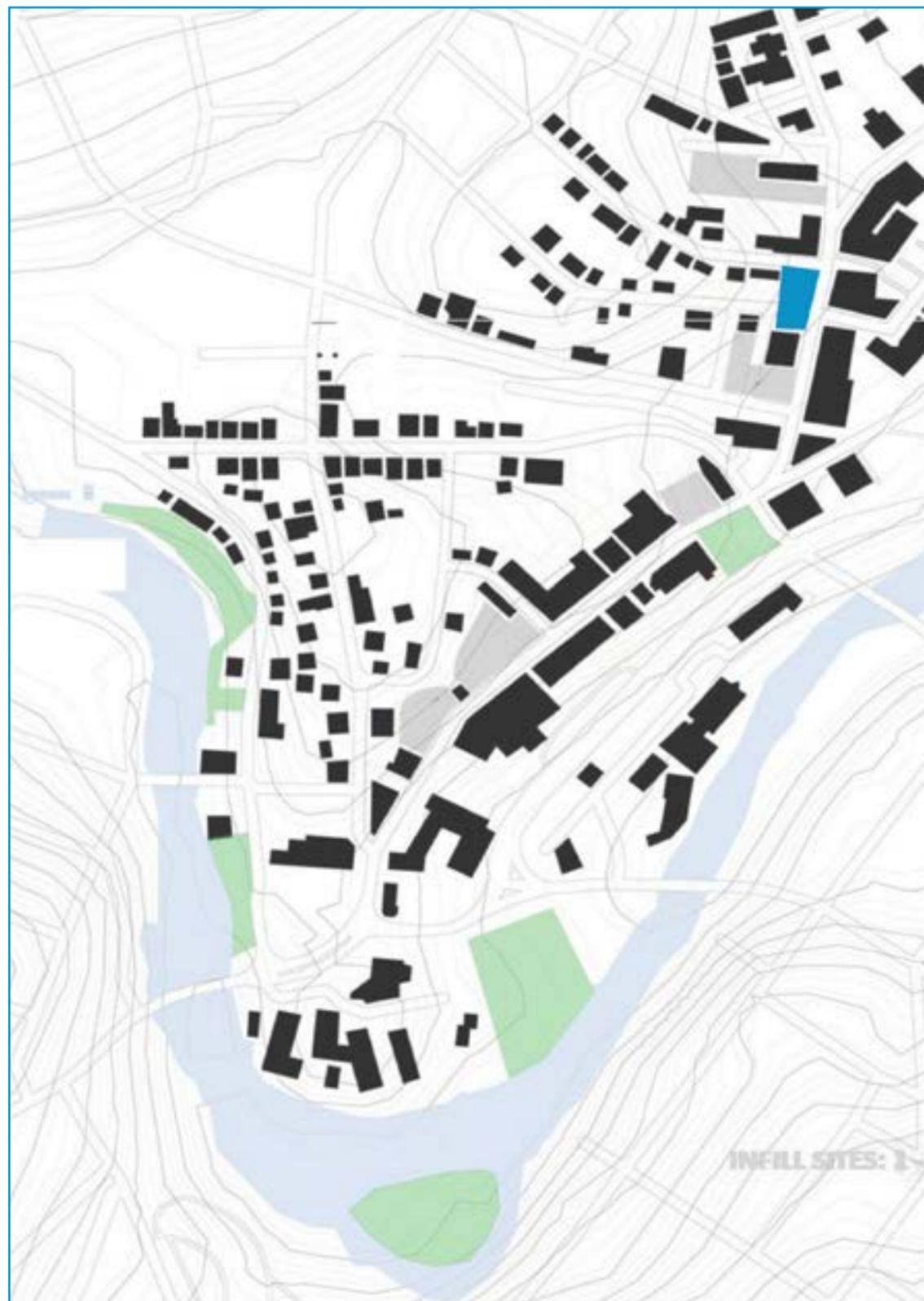
of the design, allowing visitors to view the greenhouse and create interest within the community. Adjacent on either side of the greenhouse is the public park space and inner garden courtyard.

The gallery spaces serve to inform the incoming visitors about local ecological resources as well as rotating displays and special events. Open to the general public, the galleries serve as a civic space and could be geared to both lower and higher educational students. Below the main gallery, a cafe is located which opens to both a private outdoor space as well as the inner courtyard garden. Photovoltaic panels will be utilized on the predominantly south facing sloped roof.

The auditorium serves for lectures, special events, as well as field trip presentations. Below raised seating, access from outside would serve as a storage unit for gardening and water quality testing tools. Four large classrooms, two on either floor, would predominantly serve the higher education community as laboratory and learning spaces. A smaller gallery would exist along the wing on the floor, beneath the mezzanine level above.

The site is located on an inclined site which means that the water runoff from the hill adjacent will need to be controlled.





Site 2

300 Main Street, Woonsocket, RI

Woonsocket Community Center

Site 2 - Team 5 - Amanda O'Malley



The Woonsocket Community Center is located on Site 2. The Woonsocket Community Center is in the northern portion of Main Street. The center engages the community and activates Main Street by drawing in the public and providing classes, gathering space, and performances. The center connects to the YMCA, Beacon Charter School and Stadium Theater by the functions it provides. The building provides after school programs, education space, and performing arts spaces for the public emphasizing the artistic culture of downtown Woonsocket.

The Community Center emphasizes public gathering and performances with a central auditorium that allows for community gathering and additional performance space to be used by the Beacon School and the Stadium Theater. The building also provides additional storage for performance materials and rehearsal space.

The building is organized around a central atrium which public gathering and circulation revolve around. Classroom spaces allow for continued education and a roof garden provides space for the creation of a Woonsocket Garden Club and encourage urban farming. The Community Center holds a small gallery to display work from the Beacon School and work created in the Community Center.

The Community Center provides public functions that will greatly benefit the community,



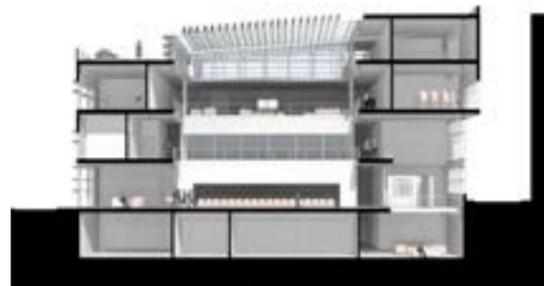
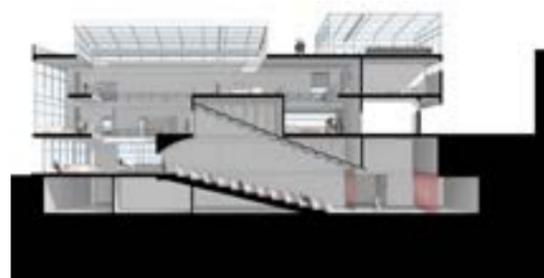
EAST ELEVATION (MAIN ST)



NORTH ELEVATION



SOUTH ELEVATION



SECOND FLOOR ATRIUM

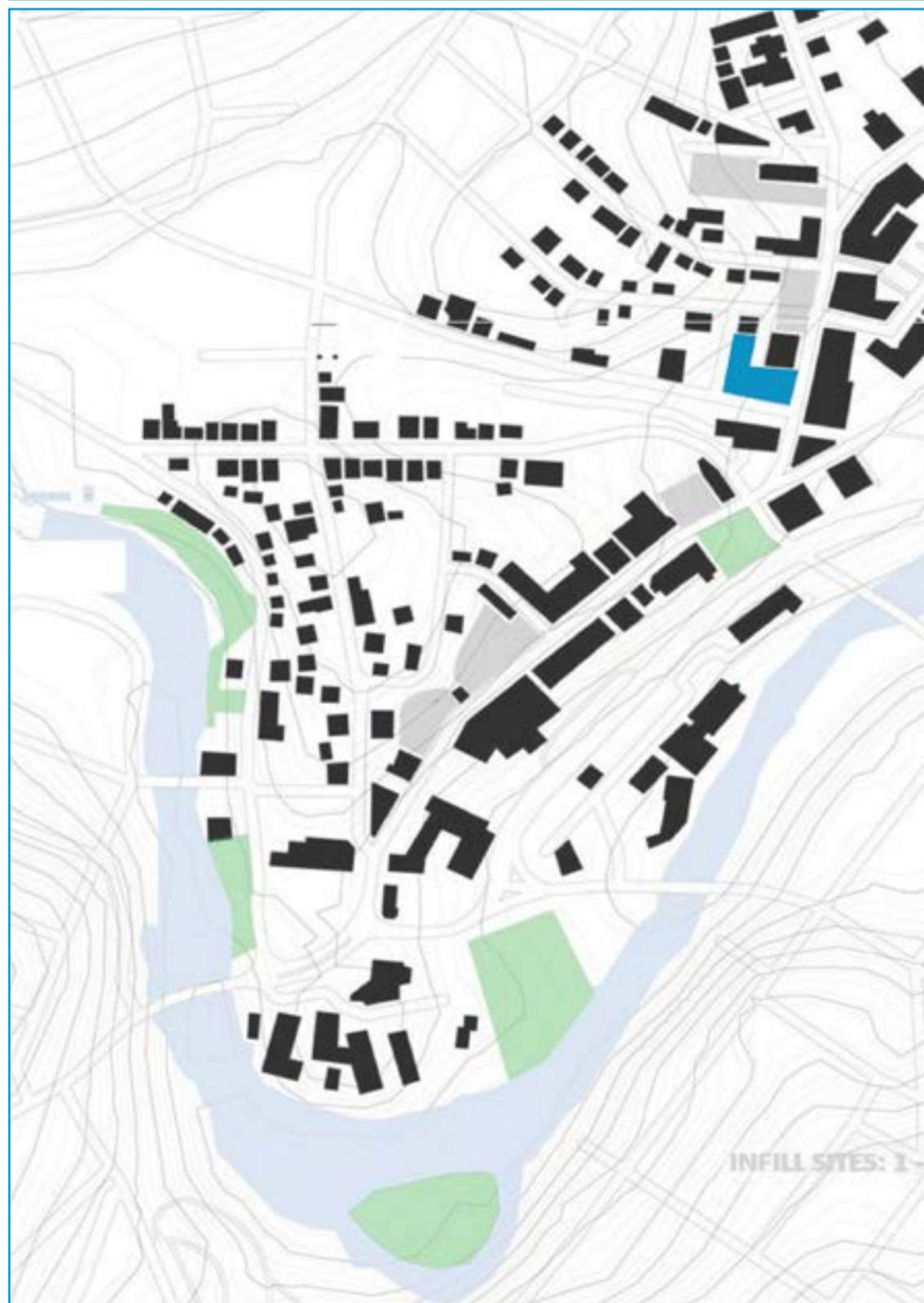


encouraging the existing creative arts emphasis the city has while forming a unifying space for the public to gather.

The building holds public functions on the first floor. The glass facade along Main Street engages those passing by and animates Main Street with visual connections to activities within the Community Center. The second floor contains multifunction classroom spaces and rentable conference spaces for group gatherings. The third floor encourages artistic activities with musical and dance rehearsal spaces along with art classrooms. The roof garden contains a green house to plant cultivation throughout the year. Raised exterior planting beds and photovoltaic panels on the roof encourage sustainable integration to Woonsocket.

The atrium unifies the spaces within the Community Center. All building functions revolve around the atrium. The glass atrium allows for natural light to enter all major spaces and the building can utilize natural ventilation. The first floor engages the public with a cafe, gallery, and auditorium that can all become open to each other, creating a versatile public space.

Circulation through the building is animated with visual connections to major aspects of the building. While circulating the atrium, visitors can look into the auditorium and observe any lectures or performances going on.



Site 3

220 Main Street, Woonsocket, RI

Niswosakit Community Care

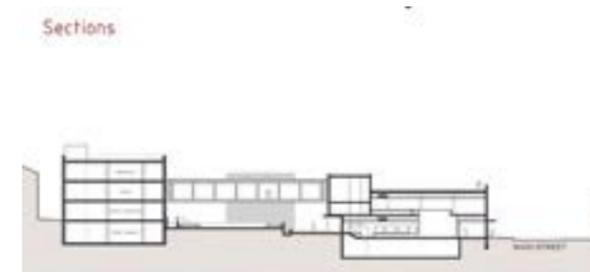
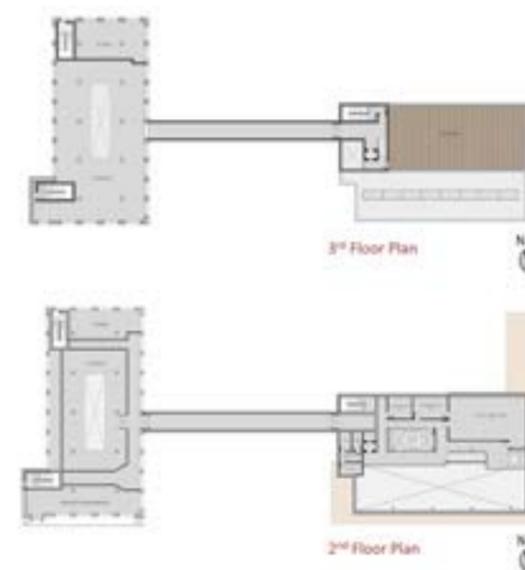
Site 3 - Team 2 - Matthew Bird



Pharmaceutical Compounding provides patient specific medicine for people who need special alterations for their medicine. Great accuracy, knowledge, and care must be associated with the atmosphere or mistakes can lead to epidemics such as with New England Compounding. Woonsocket has a history of medical advancements and taking care of the community gives us our basis for design. This facility could benefit the elderly in the community, aid the surrounding towns as many lack a similar facility, and act as an educational facility for high schoolers and college students such as the medical students from the University of Rhode Island [URI].

Suggested Program for Niswosakit Community Care Facility:

- Public Pharmacy
- Patient Examination Rooms
- Physical Therapy Assistance
- Psycho-Therapy Spaces
- Research Lab Space(s)
- Offices
- Classrooms/ Training Facility
- Living Spaces for URI Medical Students



Railroad Street Section



Main Street Section



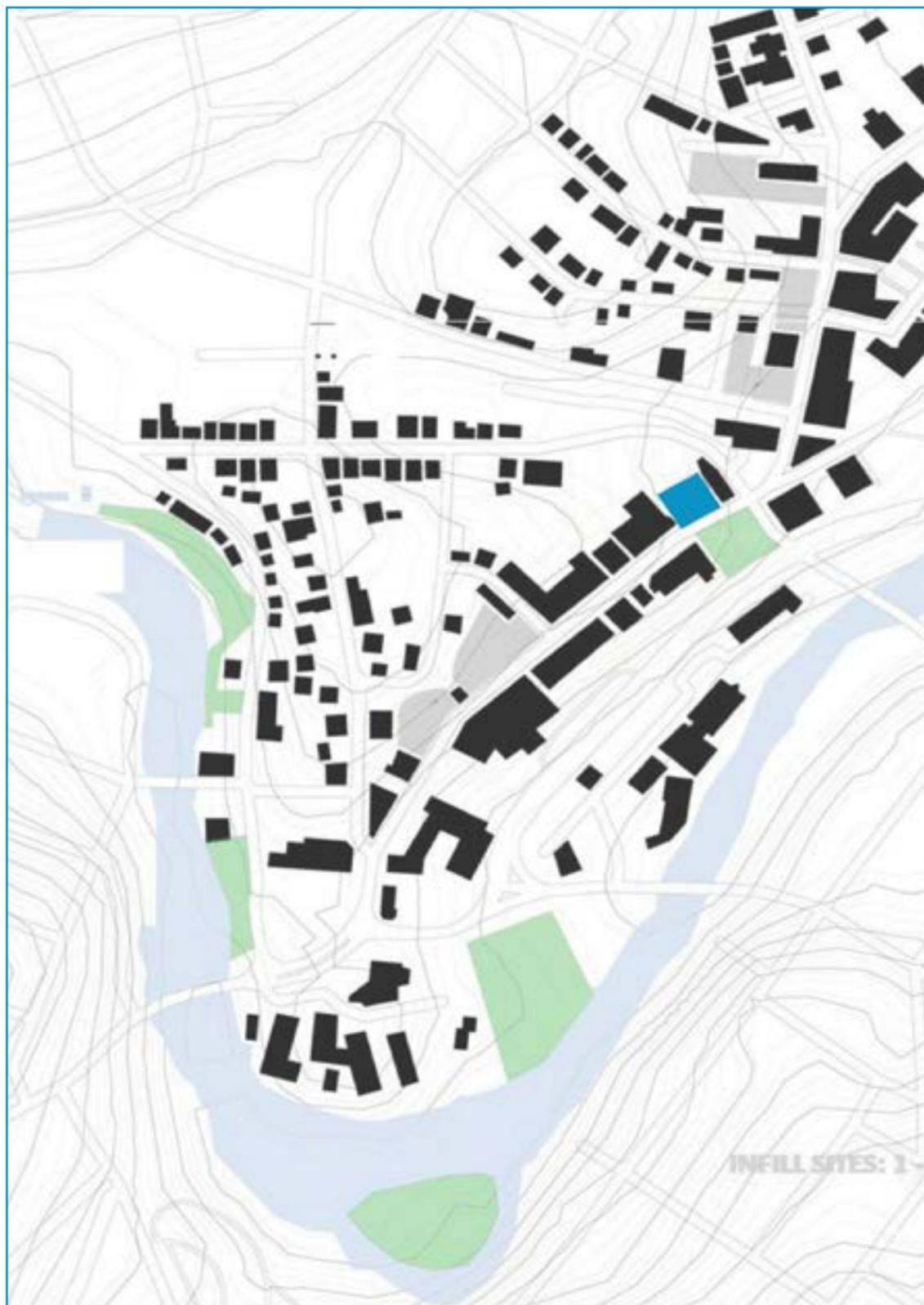
Main Street Elevation



Railroad Street Elevation



Ground Floor Plan w/context



Site 4

180 Main Street, Woonsocket, RI



Information / Tourist Center

Site 4 - Team 1 - Meghan Spratt

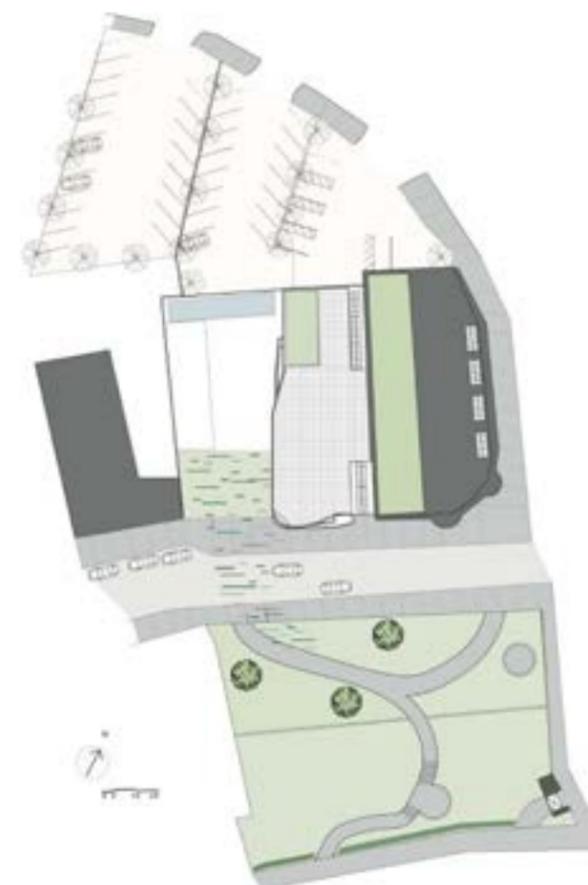
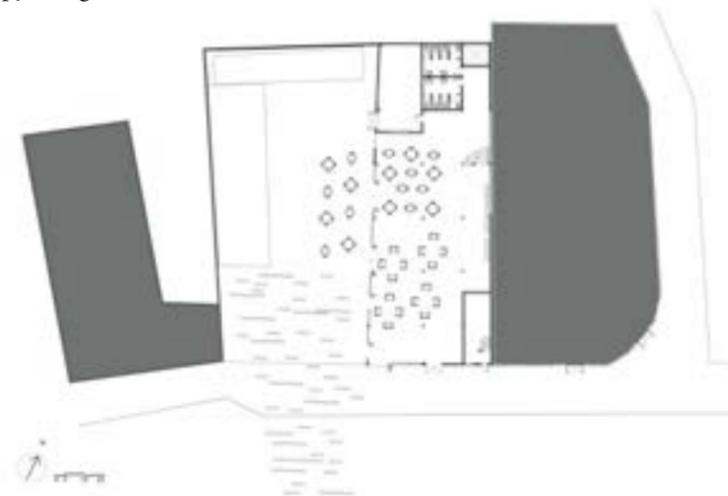
Program: Information Center; Bookstore; Cafe; Classroom & Meeting Spaces, Storage for Beacon / Stadium Theater

Landuse: Civic

Zone: Business

This building is crucial to the revitalization of Woonsocket's Main Street; meant to provide information for residents and those visiting Woonsocket. This building would provide specific information for the homeless, potential business owners, students, potential renters, etc. on where to locate different resources in Woonsocket. The building also has public amenities including a bookstore, meeting spaces, classroom spaces and a cafe. The meeting space has the capacity to be rented out, providing economical support of the city.

Sustainability: Rain gardens integrated into the parkscape; Photovoltaic panels; Permeable surfaces on cafe plaza & parking; occupyable green roof





Urban Work / Live Community

Site 4 - Team 3 - Zach Nelson

The concept for this site is to create a public circulation path which transcends the drastic grade changes present on the site and be integrated with the various functions that the building offers. This is achieved through the stepping terraces that have been created to handle the grade change. Also, with the restaurant being two stories, reaching both the Main Street level and the upper level allowing for a unique experience and entry to the restaurant from both levels. The same concept was carried through in the design of the building by the aforementioned two story restaurant with two story spaces as well as the office space which is accessed from the upper terrace and extends up into the residential portion of the building which has private terraces stepping up to a private roof garden. The sectional quality and connections between public and private which are expressed by both building and site are what is needed to help connect Woonsocket back to its Main Street.

The program of the building is to be a mixed-use typology which included commercial, restaurant, office and residential. The layout of the building maximizes efficient site use while keeping the size of each space down to reasonable proportions. To help begin the revitalization of the Main Street of Woonsocket, a business that has an established name and has strong ties to the communities which they reside needs to be implemented onto Main Street. The precedent for a company which fits these requirements is Panera Bread®. So modeling the restaurant after Panera Bread, there is the bakery and sandwich line in the back of the house

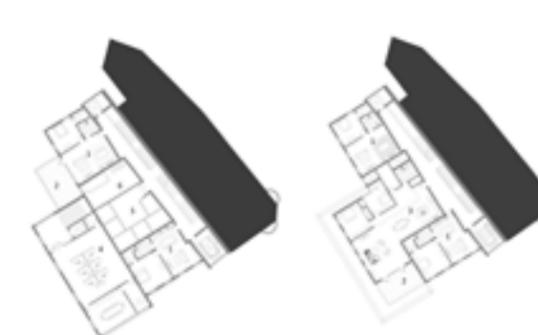
on the ground floor along with a small dining room and coffee bar. Then the larger dining area takes place on the second floor and looks out over the double height spaces. The office bar cuts into the second floor of the restaurant and is a visible feature for the restaurant. The commercial store which includes an existing mural on one of the site's retaining walls is being proposed as an art and music supply shop to serve the needs of the artistic community that is present in Woonsocket via the Beacon School for the Arts, Stadium Theater and many other organizations. This store also continues the stepping terraces and has three terraces which can be used for different features of the store. The residential portion of this building has access off of the upper terrace and has two different typologies of residences, a one-bedroom apartment, and a two-bedroom apartment. Most of the apartments include private terraces and there is a private roof garden for all residents to use.

The concept for building and site complements the program types that I have chose and they should work as a cohesive whole in the revitalization of the Main Street of Woonsocket.

The distribution of the program throughout the five floors is intended to create dynamic spaces with interwoven programmatic elements.

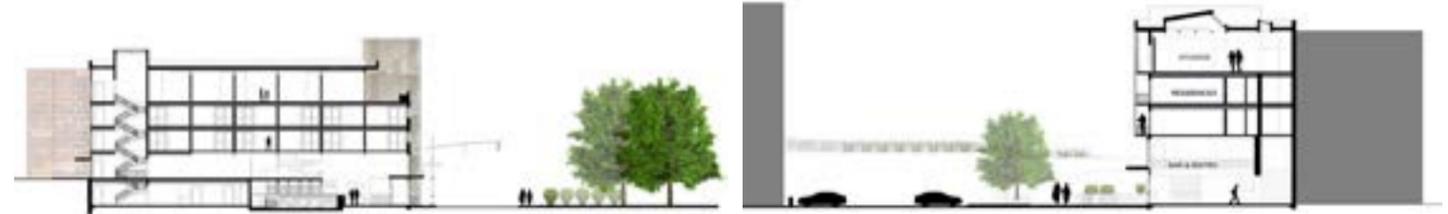


- 1. PROPOSED BUILDING
- 2. EXTERIOR TERRACES
- 3. PARKING LOT
- 4. EXISTING PARK
- 5. CITY HALL



Bistro-Bar / Artist's Residence

Site 4 - Team 5 - Jason Waisnor



The combination of a bar and bistro is great for Main Street because each function is suited for day/ night activity. Specifically, the bar is intended to vamp up Main Street's night life as well as provide more business. With Beacon High School for the Arts established, and art movements such as RiverzEdge, having an artist's residence will further strengthen this revival. The artist's residence could be responsible for coordinating education programs that involve these two organizations, such as workshops or mentoring. The artist residence would have twelve studio apartments, with five studio spaces. These studio spaces would be shared amongst the residents, or possibly rented out for gallery space.

The main goals of this project include: creating an intricate exterior space that combines circulation from upper lots to Main Street with a public function and creating an animated facade to enliven Main Street. Also, the project aims to be smart and sustainable; create opportunities for alternative energy resources.

The site plans contains several key features of our proposed master plan, including a vegetated parking area on High Street that connects to a proposed residential park. These lots are connected by ramp, and lead to the back of the Bar and Bistro and service area. This is also one the entrances to

the residences and studios. The vegetation goes through the infill site, and connects to the park across Main Street.

The building has included several key features in the realm of sustainable practices. For example, water runoff from a screen is collected into a cistern at the ground floor. The roof is designed to help direct the water to this area. Also, each apartment has their own operating sun screen. This animates the facade based on different times of the day and the year. The southwest orientation makes the skylight roof perfect for PV array. The skylight is northward due to the need for indirect sunlight for the artist's studios.

The artist's studios are located on the top floor, above their apartments. The spaces are intended to be shared, but could easily be rented as whole spaces specifically for small exhibitions or galleries. The partitions in the center can be fully adjusted and customized for creating new space. Since studios need extra ventilation, the ceiling is raised high to provide for extra ducts and a northern skylight. The spaces also can be used for mentor workshops or Beacon HS activities. The artists also get access to a vegetated balcony located at the front of the building.

As you enter the Bar & Bistro, the seating area is visible first. It is sunken and separated from the more active side of the space for privacy and quiet. During the proper seasons, the Bistro provides an adjacent outdoor eating area, which is also sunken and hidden from Main Street. The mezzanine

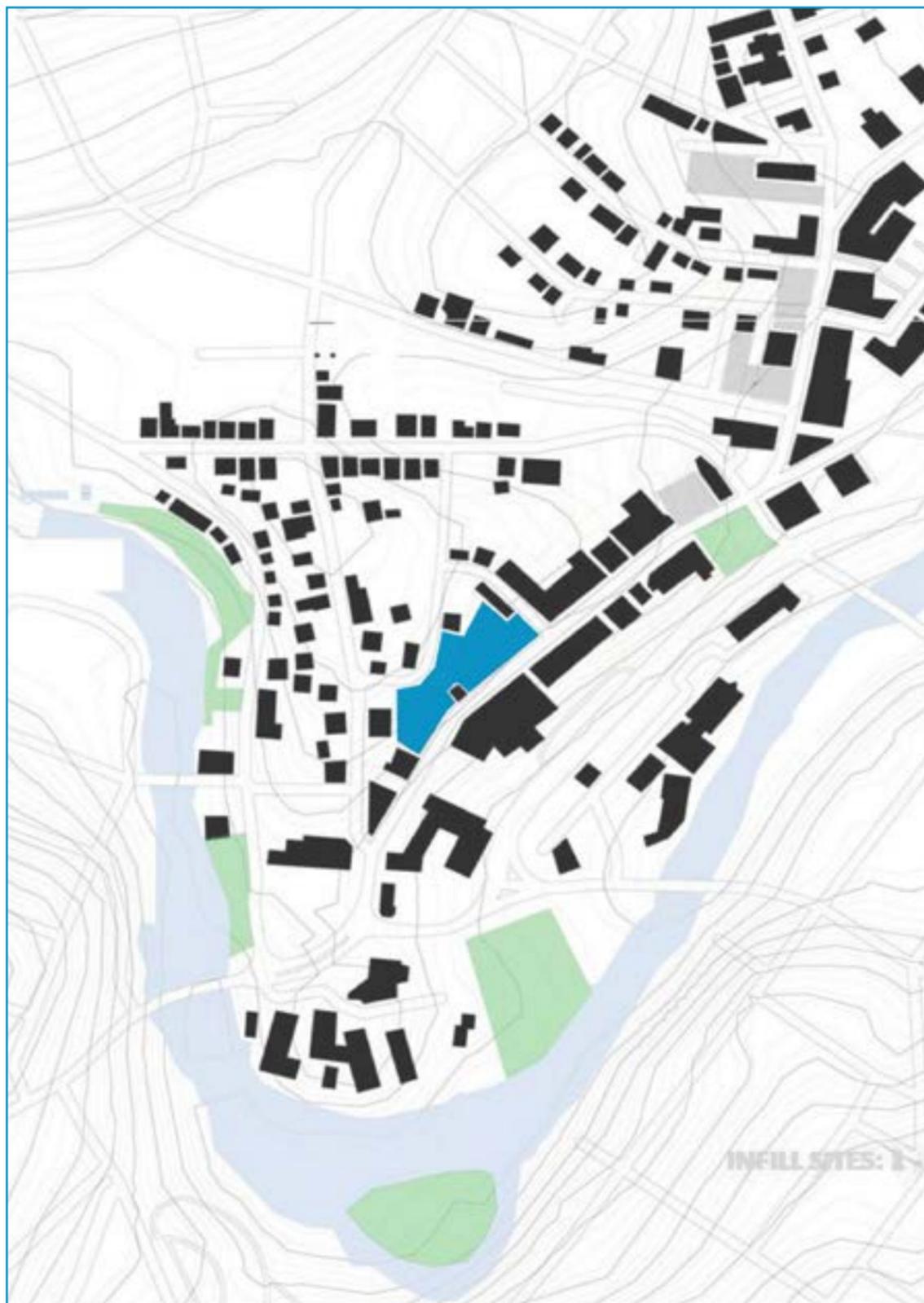
level above is primarily used for bar activities, however a second entrance is located towards the back. All exits and entrances are ADA approved.

In contrast to the daytime Bistro business, at night the space transforms into a lively bar. Customers have the option of using the mezzanine level to play games such as pool or darts. High tables are put towards the front to announce a scene to Main Street. This bar space will serve as a large Main Street attraction due to it's large volume and lighting.

As referenced in the Master Plan, the back entrance to the building is led by ramps down to the existing staircase and municipal parking lots. From the second level, people can access every function of the building via an elevator, or walk down to the parking lot through the garden space to access Main Street. The southwest corner of the building is graced by the presence of a green wall, which can help cool the garden area in summer.

The former parking lot is turned into an exterior garden space with a sculpture mound. Here, planters surround the existing trees and on the other side, a series of planters and benches wraps around the cistern. The spot is well shaded and lit at night for protection. It also houses the outdoor eating terrace for the Bar & Bistro. People walk through this space to access Main Street.





Site 5 & 6

40 - 90 Main Street, Woonsocket, RI

Aquatic Center

Site 5 & 6 - Team 3 - Colby Karambelas



The concept for this site is to create a public circulation path which connects the higher elevation of Fountain Street with that of Main Street while also displaying the use of a natural filtration system for gray water. This filtration system, known as an eco-machine, offers additional infrastructural support for the city while also creating a winter garden that offers a variety of uses and commercial elements on the first floor.

The program of the building is to be a mixed use typology which includes a commercial element serviced by the eco-machine with some supporting administrative and educational spaces. The layout and positioning of the building allows the eco-machine to receive the most amount of natural light from southern exposure. The educational spaces are all different sizes and have different levels of exposure to provide for different levels of privacy to suit a variety of needs. The final effluent from the eco-machine, producing clean non-potable water, leads to a garden which services two commercial spaces through the use of the garden and the views produced from said garden. These commercial spaces will help revitalize the Main Street of Woonsocket.

The entire process of the eco-machine is visible to the public from the exterior while those inside can also interact with the different components of the machine. The gray water is converted to a clean, non-potable water by the system and is then fed to a fish tank on the exterior of the building. The fish will act as an aquatic filter while also showing the public from the exterior what the machine produces. A glass water retention tower is also placed at the entrance and able to be seen from afar, offering a monument to the city and allowing another display of the clean water produced.

The cleaned water will then flow down two walls in the commercial sector and, after another free water retention holding area, will service a garden. The garden had the ability to service the commercial spaces through the growing of fresh herbs year round for the tea shop commercial element. This also offers a soothing sound, from the sound of the water on the wall, and a pleasant internal greenery.

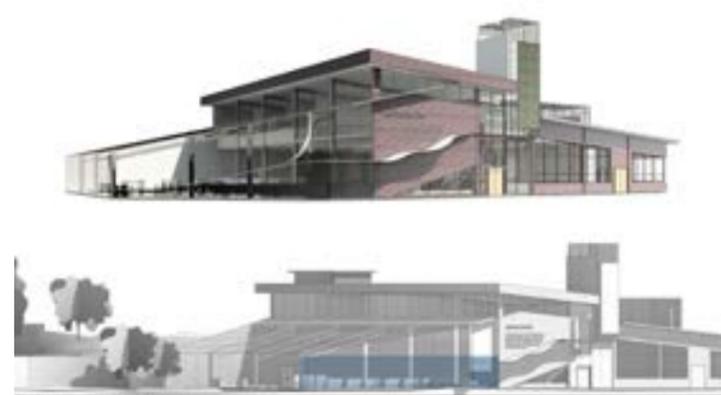
The building concept, layout, program elements and locations will allow for the revitalization of the Main Street of Woonsocket through an addition to infrastructure



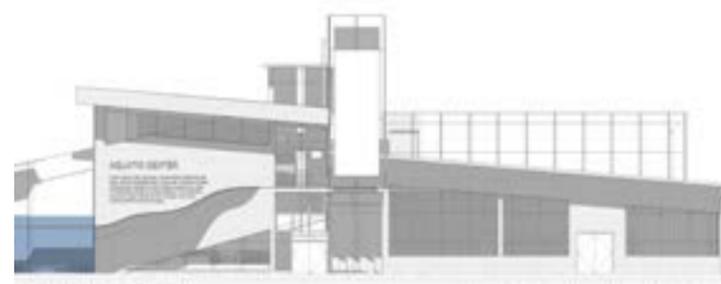
INTERIOR: SOLAR TANKS



INTERIOR: MARSH



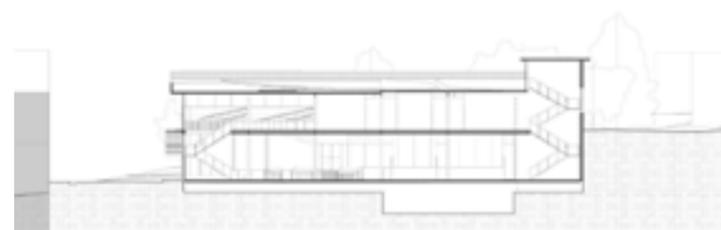
SOUTHERN ELEVATION



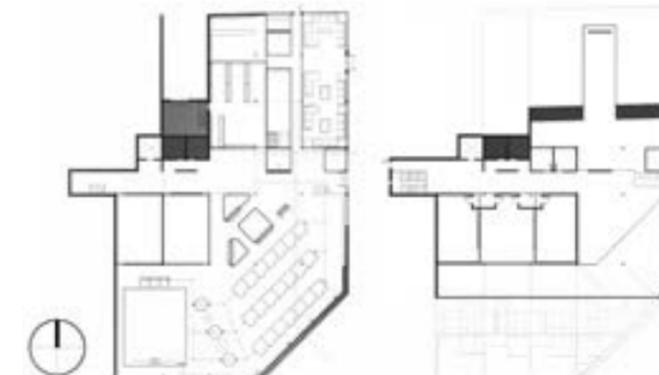
SOUTH-EAST ELEVATION



SECTION 1



SECTION 2



- EXISTING PARKING
- PROPOSED PARK
- PROPOSED AQUATIC CENTER
- MIXED-USE: RESIDENTIAL & RETAIL
- RESIDENTIAL





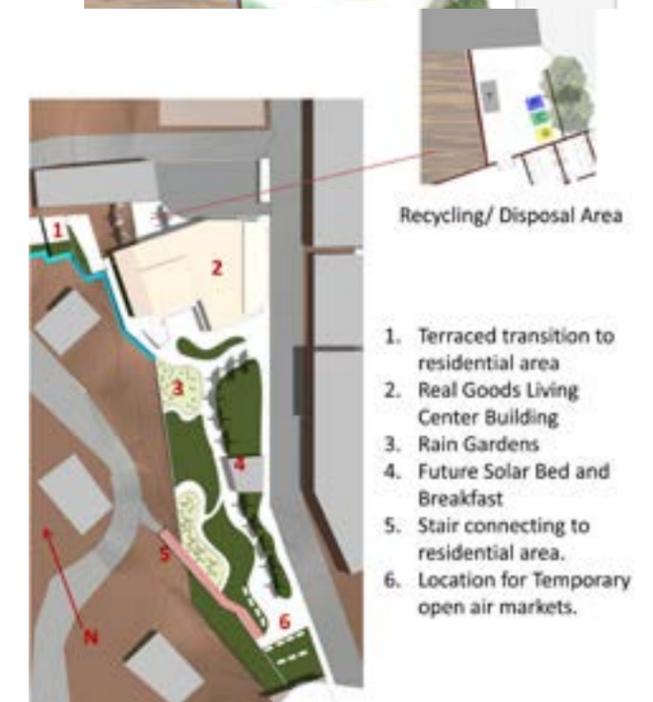
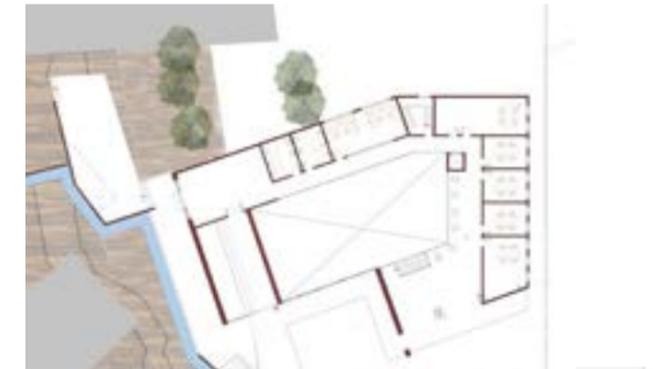
Real Goods Living Center

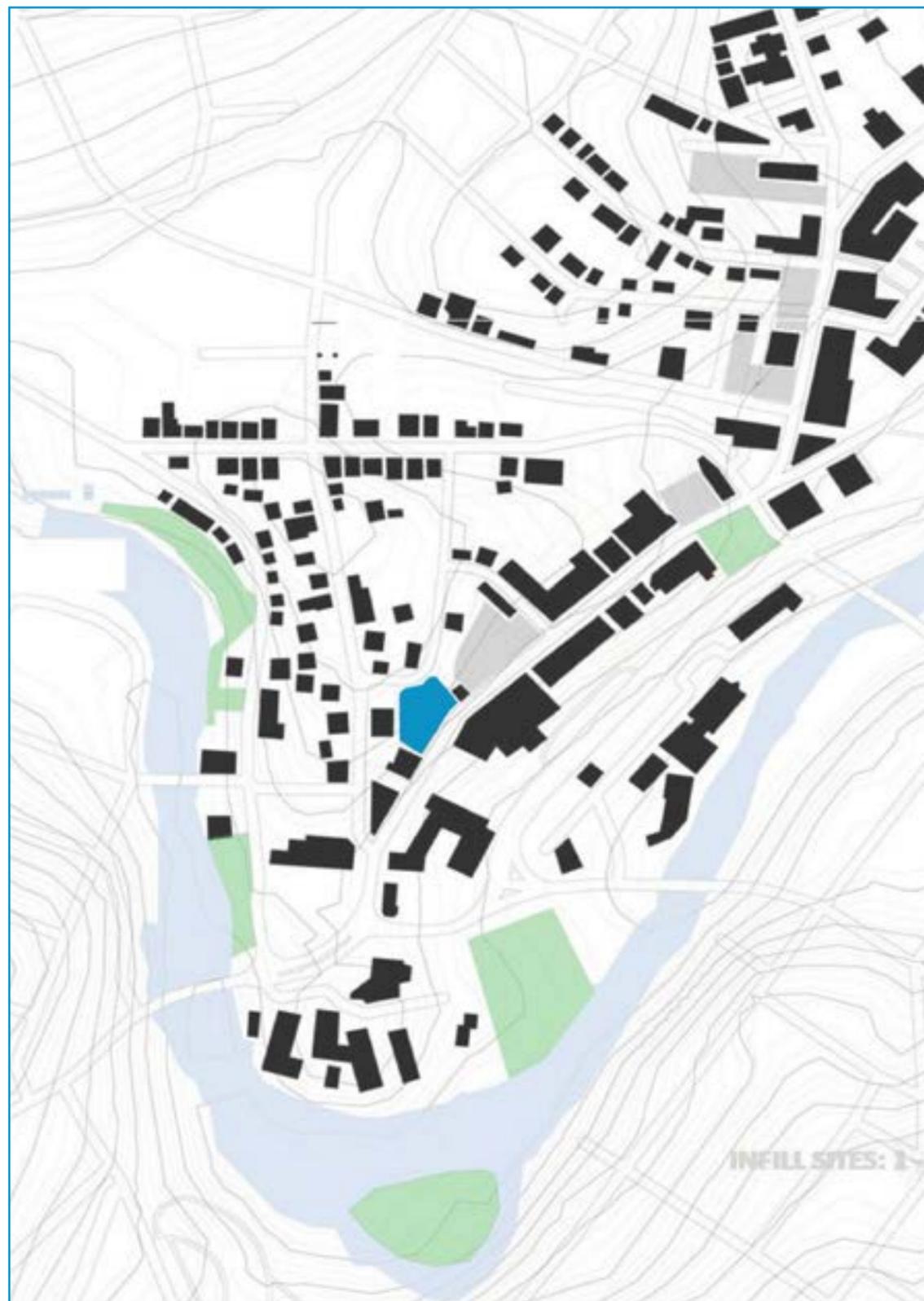
Site 5 & 6 - Team 2 - Andres Daza

The mission of Real Goods Inc., based out of Hopland, California, is to promote the adoption of renewable energy to reduce the human ecological footprint. Using proven technologies, high quality engineering and professional installation practices, they enable customers to transition to clean energy. This building provides education, promotes community and is ultimately maintained through customer satisfaction. Bringing this facility to Woonsocket would provide the area with a one-of-a-kind attraction that promotes sustainable living.

Program: retail space; classrooms; office space; flexible workshop space; exterior gardens (oasis); and storage

The ground floor consists of the main showroom space. All of the interactive displays are placed on the street side and a large shelving wall with merchandise is on the other side. The storage has access to a recycling area and the showroom space. The second floor incorporates the educational areas of the building. Five classrooms face Main Street while a lecture space is located on the other side. Two large workshop spaces provide open space for any seminars or tours and both have access to exterior balconies.





Site 6

40 Main Street, Woonsocket, RI

Urban Ecology Center

Site 6 - Team 1 - Sarah Volkmann



The mission of the building is: educate the residents of Woonsocket about Urban Ecology; create a destination and landmark on Main Street; utilize sustainable building practices and site strategy to create a teaching building; and create pedestrian access from Fountain Street down to Main Street through the building.

Program: Main gallery space; exhibits; three intern apartments; community gardens/ urban farm

Landuse: Civic

Zone: Cultural

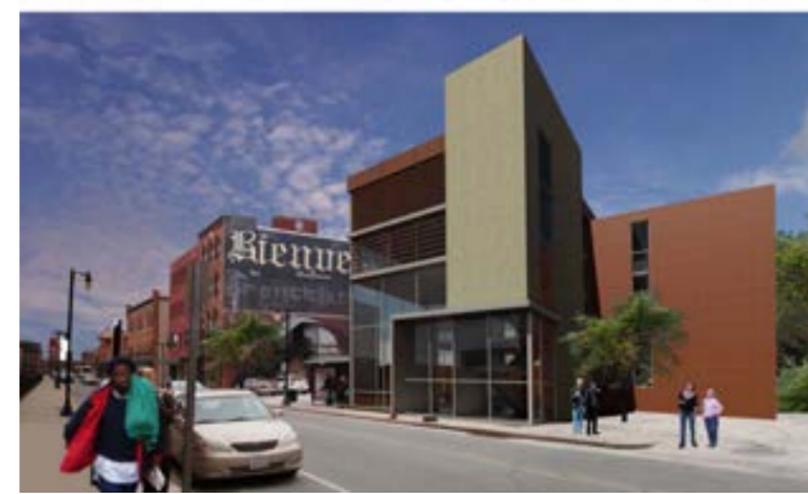
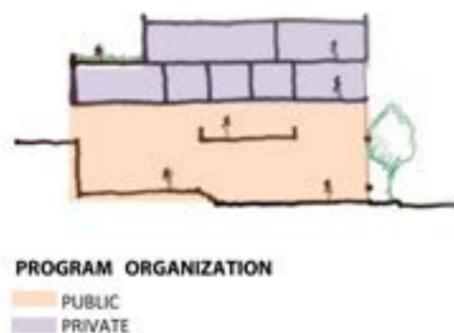
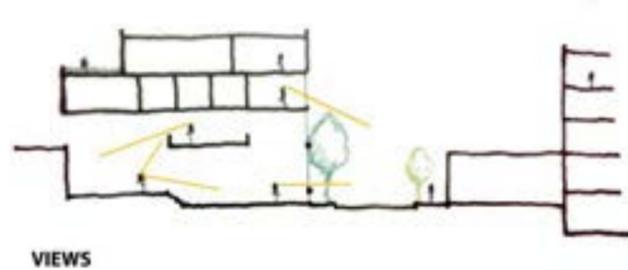
This building is meant to educate individuals of all ages about the sustainable features of an urban landscape focusing on building systems, energy conservation, use of exterior spaces, urban garden, and building materials. This site also houses a large exterior public park with a terraced garden

for community use intended to farm produce for those in the community.

Sustainability: Rain garden for stormwater management; Photovoltaic Panels; Geothermal HVAC; permeable surfaces on public plaza; occupiable green roof

The building hopes to act as a teaching agent, leading by example in the areas of urban ecology and sustainability. The combination of the materials of the building and the program allow the users of the space to learn and experience urban sustainability simultaneously.

Shading devices allow the southern facade to remain a glass curtain wall, opening the building out onto Main Street. Terra cotta louvers over low-e glazing respect the historic context of the city while allowing a sustainable intervention.





Children's Museum & Youth Center

Site 6 - Team 4 - Jessica MacDonald

One of the main issues that this building addresses is the dramatic change in topography that originates at High Street and continues all the way to the river's edge. The exterior terraces of this site step down, mimicking the natural grade change, while managing storm water runoff. The site also allows for an accessible public pathway from Arnold Street directly to Main Street.

Program: exhibition spaces; childcare facilities; rock climbing, and multi-use spaces

The Children's Museum and Youth Center provides after school programming for teens and young adults. The spaces are generated for evening and weekend classes, rehearsals and meetings, weekday childcare facilities, discovery and learning for children, and cafe, computer, and reading spaces. The building establishes both interior and exterior public connections from Arnold Street to Main Street.

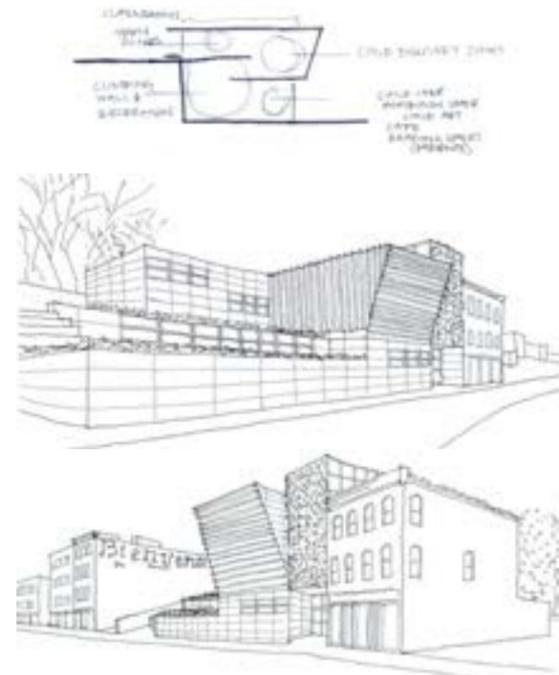
The building provides an exterior public ramp, as well as an interior public stair and elevator. These right of ways remain open for use 24/7 to provide safe and accessible access to Main Street from the neighborhoods above. This public right of way is a key connection providing access from High Street to the river's edge, and ties into our previously mentioned goal of establishing these pedestrian connections.

The main entrance to the building is located on Main Street, however there is a secondary entrance from Arnold Street that can be accessible for school trips or larger functions.

This building serves a variety of use groups. The concept is to provide each user with a unique

zone. At the Main Street level are the community facilities i.e. cafe and art exhibition space, as well as the childcare facilities and rock climbing facilities. The second floor is a flexible use child discovery zone that includes a lego wall, water station, and climbing gym. The third floor is the teen zone which utilizes flexible multi-use spaces for art, music, dance/theater, games and more. These spaces can also be reserved for town meetings and conferences.

The northern facade is a glass wall that looks out onto the community gardens. Located behind the wall is the public stair connecting Main Street to Arnold Street. This facade remains transparent to ensure safety and prohibit vandalism. The Main Street facade is colorful and full of texture to become a sought after destination for local families and tourists alike.





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