Spring 2013

The Revitalization of Springfield's North End - Envisioning New Housing and Places to Live, Work and Recreate

Samantha R. Anderson
University of Massachusetts - Amherst, sanderso@larp.umass.edu

Ngoc Xuan Doan
University of Massachusetts - Amherst, nxdoan@larp.umass.edu

Ivette Banoub
University of Massachusetts - Amherst, ibanoub@larp.umass.edu

Keith W. Hannon
University of Massachusetts - Amherst, khannon@larp.umass.edu

Trudy M. Hall
University of Massachusetts - Amherst, thall@student.umass.edu

See next page for additional authors

UMass Amherst Design Center in Springfield
Department of Landscape Architecture & Regional Planning
Graduate Urban Design Studio Spring 2013
Professor Frank Sleegers

The Revitalization of Springfields North End - Envisioning New Housing and Places to Live, Work and Recreate

Samantha Anderson • Ivette Banoub • Ngoc Doan • Trudy Hall • Keith Hannon • Irene Miller • Colin O'Donnell • Amanda Rookey • Yan Xu

Contact:

Frank Sleegers
Assistant Professor
Dipl.-ING, MLA, Landschaftsarchitekt
Department of Landscape Architecture & Regional Planning
109 Hills North
University of Massachusetts
111 Thatcher Road , Ofc 1
Amherst, MA 01003-9357

e-mail: sleegers@larp.umass.edu
phone: 413-577-0848
fax: 413-545-1772

Text and graphic editing:
Frank Sleegers
Printed: May 2014

In memoriam:

The former Chestnut Street Middle School burned down in the early morning of September 3, 2013. Thoughts and inspirations of this report will hopefully catalyze new projects in the area to revitalize the North End of Springfield, MA.

Former Chestnut Street Middle School, Photo February, 2013.

UMass Amherst Design Center in Springfield
Department of Landscape Architecture & Regional Planning
Graduate Urban Design Studio Spring 2013
Professor Frank Sleegers

The Revitalization of Springfields North End - Envisioning New Housing and Places to Live, Work and Recreate

Samantha Anderson, Ivette Banoub, Ngoc Doan, Trudy Hall, Keith Hannon, Irene Miller, Colin O'Donnell, Amanda Rookey, Yan Xu

Table of Contents

Acknowledgments

The Department of Landscape Architecture and Regional Planning, U Mass Amherst, continues the successful collaboration with the Office of Planning and Economic Development of the City of Springfield in the spring of 2013. The studio is coordinated and sponsored through an agreement between the City of Springfield and the UMass Amherst Design Center.
This Graduate Urban Design Studio will develop a tangible vision for the revitalization of a neighborhood around the topic of new housing opportunities. These proposals will be discussed with the public, planning officials and a potential investor to spark more interest and conceptualize a new vision for the area.

We specially thank Scott Hanson from the Springfield Department of Planning & Economic Development for his untiring enthusiasm and great cooperation on this project.
We thank Kevin Hinchey from Baystate Health - Academic Affairs, Executive Director Thomas Kegelman from Home City Housing, Inc., resident Phil Burdick, Brian Connors from Planning & Economic Development, Beverly Gallo Peregrin Group, Henry Renski, the Baystate Health Students, Jose Claudio, North End Campus Committee, Michael DiPasquale and all other stakeholders and people that attended our meetings, came to our presentations and gave feedback and support of any kind.

We are thankful to the faculty of the Department of Landscape Architecture and Regional Planning for participating and contributing their valuable comments during our studio reviews.

We thank all the students in this Urban Design Studio for their great work to develop creative ideas for the Springfield.

Introduction

The following report summarizes the results of a seven-week design studio in our Landscape Architecture Program and engaged experts, stakeholders and medical students of the Memorial Square Neighborhood, in conjunction with planning officials from the Springfield Office of Planning and Economic Development. The project brought students and local export together in a supportive and constructive atmosphere of reciprocal learning. This report was finished after the historic Chestnut Street School burned down on September 3, 2013. It is a tragedy for this City that many great buildings of the past still continue to be neglected, underutilized or destroyed.
Nevertheless do we think that the findings of this report help to redefine and revitalize one of the most greatest neighborhoods in the City. Our proposals seek to connect the powerful economy of the medical sector with the rich culture of the North End to create a more balanced social and economic climate. We believe, that more spatial, green connections of the hospitals with local businesses on Main Street together with exploration of market-rate housing can benefit the area and will result in long-term opportunities for current and future residents.

We were enthusiastic working on future scenarios and believe that change comes with visions and ideas. They pave the way for a creative mind-set full of possibility and optimism that will change and transform place.

Frank Sleegers,
Assistant Professor, Co-Director UMass Amherst Design Center in Springfield
Department of Landscape Architecture and Regional Planning
University of Massachusetts Amherst

Study Area and Context - Studio Goals

Studio Project Area

The larger study area is located in the North End of Springfield and part of the so called "Springfield Medical District" with the neighborhoods of Brightwood, Memorial Square and Liberty Heights. It comprises the largest employee of the city within two of their poorest neighborhoods (U.S. Census' 2005-2009 American Community Survey).

The studio focus area is located around a proposed 50-60 unit market-rate housing project proposed by the Peregrine Urban Initiative, a firm that specializes on residential development in emerging urban markets. It is envisioned that the realization of this project in the formerly Chestnut Street Middle School complex could be a catalyst for neighborhood revitalization. The economic goal is a diversification of the income structure in the area with a positive effect on neighborhood commerce and further investments. What are other interventions that would make the area more livable and create an incentive for a comprehensive renewal? What are the priorities to initialize this change? Our plans will be complementary to the proposed housing project on Chestnut Street.

Studio Goals

The goal of this studio project is to envision the quarter around the former Chestnut Street Middle School in the North End as a place with new opportunities to live, work, shop and recreate. Revitalizing this quarter will engage the assets of the neighborhood for current and future residents.

The project will deliver public service to some of the most disadvantaged neighborhoods in Springfield. It will foster a planning process bringing together neighborhood stakeholders and University faculty and students.

Background and Studio Context

The North End of Springfield, Massachusetts is located north of downtown along Main Street, with I-291 to the south and the Springfield–Chicopee border to the north. To the west the Connecticut River is a natural boundary, and to the east the boundary is defined by Armory Street. The North End comprises three neighborhoods: Brightwood to the west along the Connecticut River, Memorial Square in the center, and Liberty Heights to the east. Other, physical challenges in the North End as a whole include a) the fragmentation of the area by two Interstates I-291 and I-91-and the Springfield-Holyoke Railroad Line and , b) the lack of commercial activity in the areas immediately adjacent to the Baystate and Mercy medical campuses.

Assets include the North End's proximity to downtown Springfield and the North End's thriving medical institutions. The medical industry is, in fact, with about 9,000 employees one of the largest employers in the region. Unfortunately, only 2% (Renski et al. 2011) that work in this sector live in the "Medical District" and only 21% live in Springfield. Additionally, Memorial Square is one of Springfield's neighborhoods with the highest percentage of population loss - about 15% from 2000 to 2009 or in absolute numbers 4,889/4,134).

"Only a fraction lives within the Medical District, and those that do are concentrated in relatively low-earning occupations… There is a pretty consistent trend that the more one earns, the further they live from the District. While certainly beneficial to the larger region, this means that Springfield fails to capture the indirect economic benefits of its medical industry - the jobs and businesses that are supported by the spending of households in their own neighborhood." (Renski et al. 2011)

Our project searches for possibilities to stop these negative trends - new housing typologies in the area could initiate change in the demographic structure and stabilize the neighborhood. This intervention cannot stand on its own and has to be supported by systematic solutions.

Study Area and Context - Studio Goals

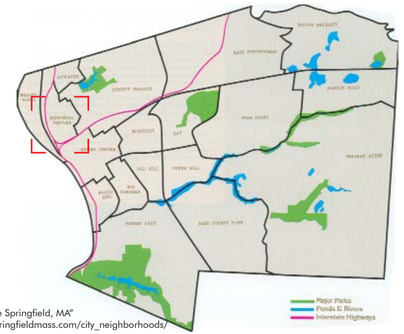
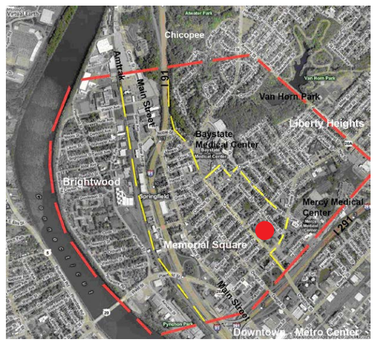
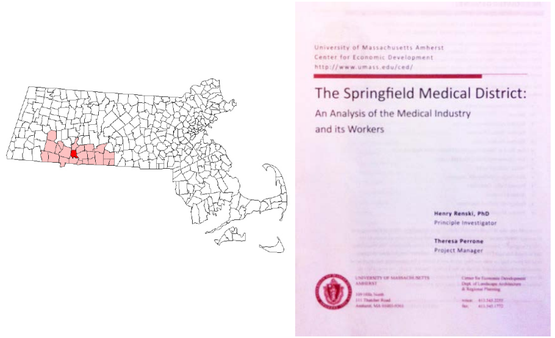


Image: "Choose Springfield, MA"
http://choosespringfieldmass.com/city_neighborhoods/

Project area in the context of Springfield's seventeen neighborhoods.



The larger project area with the three neighborhoods: Brightwood, Memorial Square, Liberty Height and the location of the proposed market-rate housing project at the historic Chestnut Street Middle School.



This report investigated the workforce of Springfield's medical industry in the context of the city's region.

The medical industry has a long history. It was founded as the "Springfield Hospital" in 1883. The photo depicts the headquarter of Baystate Medical in the 1940's.

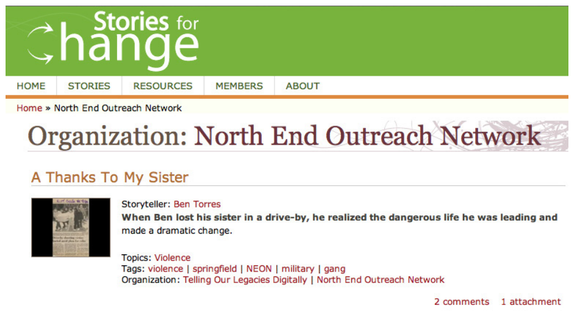
Cultural and Social Character - History, Demographics and Economy

The medical industry plays a major role within the city of Springfield and the regions. Today Baystate Medical Center, Mercy Medical Center, and Shriners Hospital are the main facilities. Numerous other businesses fro medical services and production are located within the three neighborhoods of the North End, the so-called "Medical District" (Renski, 2011). The North End is one of the poorest neighborhoods in the state of Massachusetts. The question is how the medical industry and their workers could be a stronger driver for economic and social benefits in the area. "Tapping into the spending power of these workers would... be a transfer of income from one neighborhood to another." Renski, 2011. Organizations that improve the quality of life in the North End are:

- North End Youth Center Branch YMCA
- North End Community Center Inc.
- North End Outreach Network (NEON)
- Stories for Change Program
- Western Mass Hispanic Chamber of Commerce

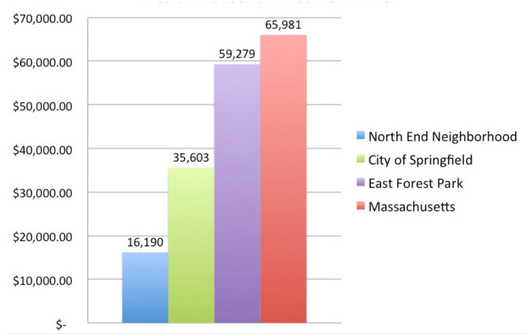
Sources:

- Springfield and its Neighborhoods: A Statistical Profile for Springfield, Massachusetts, 2011
- United States Census Bureau
- Brightwood Neighborhood Report, April 1994
- Memorial Square Neighborhood Report, July 1994
- The Springfield Medical District: An Analysis of the Medical Industry and its Workers, Renski, 2011
- North End Community Assessment Report, 2006-7
- North End Strategic Plan, prepared for NEON by CRCP at MIT, 2003

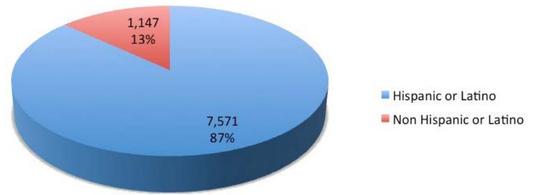


The North End has the largest Latino population in the City. The residents are professionally organized and share expansive economical and social networks. The activities of community leaders create a strong sense of identity.

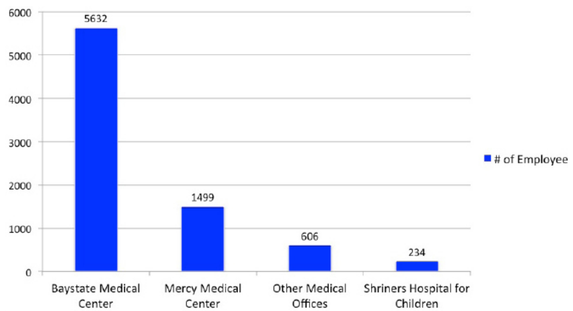
Cultural and Social Character - History, Demographics and Economy



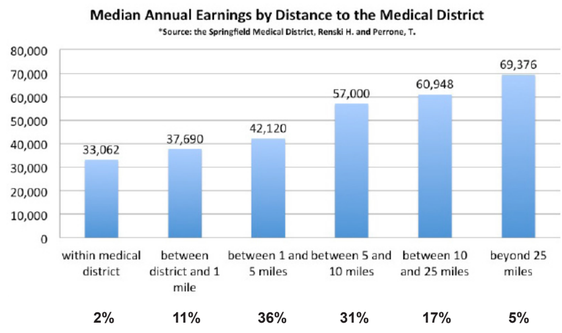
The median household income in 2009 of the North End Neighborhood is low. Almost 50 % of the households live below the poverty level.



The majority of the residents are Latinos.



The medical industry has over 10000 employees or about 13 percent of the City's total employment base (Renski, 2011).



The greater the employee salary, the furthest they live from the North End.

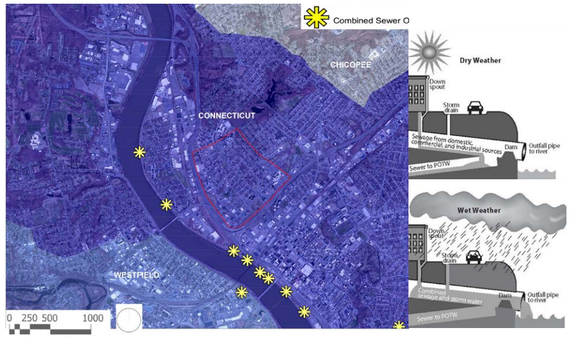
Hydrology, Stormwater Management, Impervious Surfaces and Topography

The area is part of the larger Connecticut River watershed. Today CSOs (Combined Sewer Outlets) contribute to the poor water quality of the Connecticut River. Increasing infiltration and other alternative methods for stormwater management could mitigate water pollution by reducing stormwater volume in the CSO system.
The project area slopes from east to the edge of the Connecticut River. To the east we find an upper terrace with up to150′ elevation. The embankment of the terrace was molded by the glacial lake Hitchcock. The lower, mainly flat terrace has an elevation of about 60′. The original floodplain is altered by Interstates 91 & 291 with their steep embankment that separate the neighborhood.
The flat topography of the lower terrace is suitable to accommodate infiltration. Infiltration strategies and a reduction of the large street profiles could reduce the high percentage (64 %) of impervious surfaces in the area and minimize urban heat island effects.

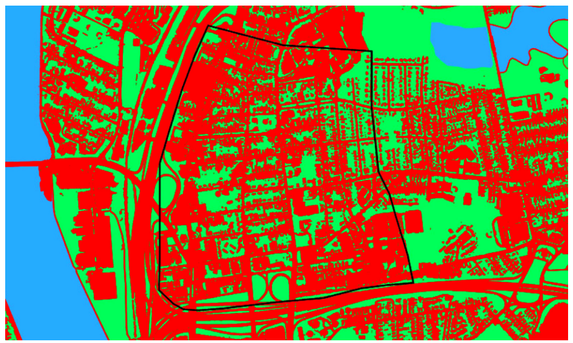
Over-dimensioned street corridors like Chestnut Street contribute to the high percentage of impervious surfaces in the area.

Hydrology, Stormwater Management, Impervious Surfaces and Topography

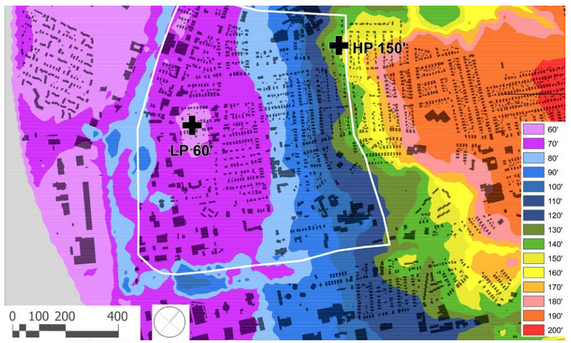
The area is part of the larger Connecticut River watershed.



Three CSOs are located in vicinity to the project area.



64 % of the project area has impervious surfaces. These are depicted in red.



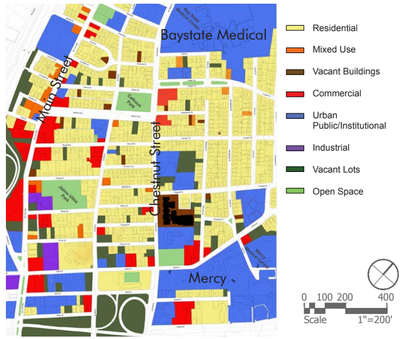
A large portion of the area is flat.

Land Use, Zoning and Urban Grain

The major land use is residential and covers the center of the project area. Large areas of medical facilities are concentrated in north and south. This hides the statistical fact show that most medical employees do not live in the neighborhood. Commercial and mixed uses are concentrated on Main Street. This street has many assets ranging from distinctive architecture to successful small-scale retail. Diverse businesses including street vendors and other activities are found along Main Street, creating small hubs of activity during the daytime. Most shops and small restaurants close down early in the evening. There are little to no commercial land uses close to the major medical institutions. Vacant lots and boarded up houses appear throughout the neighborhood. These depreciate property values and the aesthetic value of neighborhood. The former Chestnut Street School lot leaves a large portion of land underutilized. Development of this area should have a high priority to catalyze revitalization. Baystate's and Mercy's large facilities and parking lots are at odds from the overall character of the neighborhood. A band of industrial and highway-oriented commercial zoning emphasizes the barriers created by the highway systems, separating the North End from the downtown and Brightwood neighborhoods. Calhoun Park to the north and Jaime Uloa Park to the south are the most important public open spaces in the neighborhood.

The urban grain is fairly uniform and determined by residential multi-family units. The large-scale scale medical facilities are legible in the north and south.

The zoning concurs with the land use and shows a majority of medium density multi family residential (RES B); multi district-oriented businesses (Bus A) area are located on Main Street, two occurrences of district-oriented commercial (Com A) are located on Chestnut Street. It could be considered to plan for more distinct pockets of commercial/business activities on Chestnut Street.

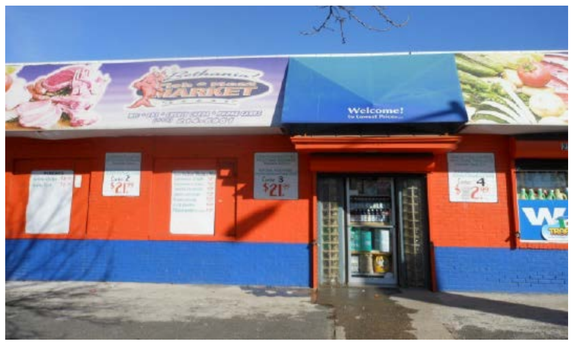


The major land use in the project area is residential.

Ringgold Street facing west connects Chestnut Street with Dwight Street is a typical residential street in the neighborhood.

The urban grain is fairly uniform and determined by residential multi-family units. The large-scale scale medical facilities are legible in the north and south.

The zoning concurs with the land uses.



Main street has a high diversity of small stores and some smaller restaurants. There are no activities later in the evening or at night.

Food trucks expand the diversity of commercial activities in the neighborhood.

Public Open Space System

At the smaller neighborhood scale, the urban fabric is strong. There are some missing, more legible connections to major parks such as the Jaime Ulloa Park, Van Horn Park, and the Connecticut Riverwalk and Bikeway. These connections could be improved in order to revitalize, encourage, diversify, and inviting new more users to these potential areas in the neighborhood. Additionally, the poor qualities for walking and cycling along the major corridors could be improved.
On the larger neighborhood scale the barriers of the train tracks, I 91, and I 291 are apparent. The major street arteries such as Dwight Street and Chestnut Street have potential to offer opportunities if they would be developed as bicycle friendly corridors. There are also limited number of trail entrances, thus having more entrances would invite more users. There are many underutilized green open spaces as well as existing open spaces such as forest/vacant lots that could be beneficial for wild life and infiltration such as Chapin Terrace and the large green strips along the highways.

View from Downtown Riverfront Park onto Memorial Bridge and the Connecticut River.

Connecticut Riverwalk and Bike Way.

Railroad Corridor dissects the North End.

Proposed major open space network.

Major public open space network.

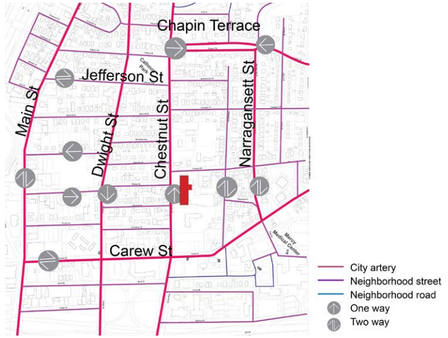
The I-291 separates the North End from downtown Springfield.

Calhoun is a very active park in the neighborhood.

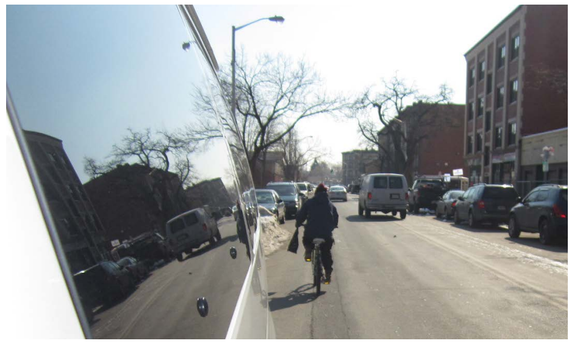
There are many places in the neighborhood that could facilitate infiltration strategies.

Landmarks and Destinations, Street Network and Public Transportation

The majority of commercial destinations are located on Main Street and include Medina's Latino grocery store or La Plaza del Mercado at the intersection of Morgan and Main. Smaller churches are dispersed in the area and there are many historic buildings like the former Jefferson Avenue School that has been turned into a social housing project. All destinations on Main Street lie beyond the 1/4 mile radius from the hospitals. This is about 10-15 minutes walking time. The gridded, mostly coherent street network is easy to navigate with the exception of one-way Dwight Street and Chestnut Street. Many design proposals seek to turn these arteries into two-way streets to reduce traffic speed and distribute traffic loads more equally. Bicycles are used by some people but navigating is compromised by the lack of distinct lanes or pathways for bicyclists. Bike-share programs could create an incentive to increase bike-usage within the medical workforce. Local businesses on Main Street would benefit. The area is well connected with the PVTA bus system. The schedules should expand later into the night to cater to medical workers that work at unusual times. Bus shelters should be added.

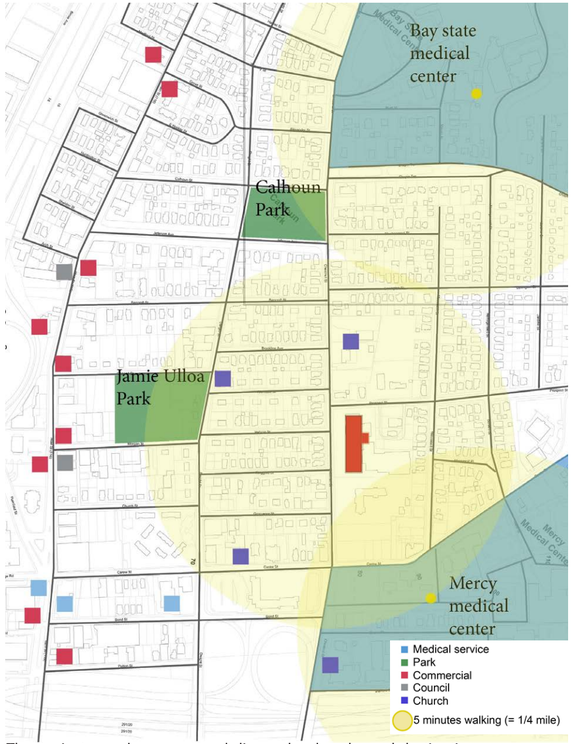


The Memorial Square neighborhood has many historic landmarks. The former Jefferson Avenue School is an example for adaptive reuse. The City should seek for more incentives to attract market-rate usage.

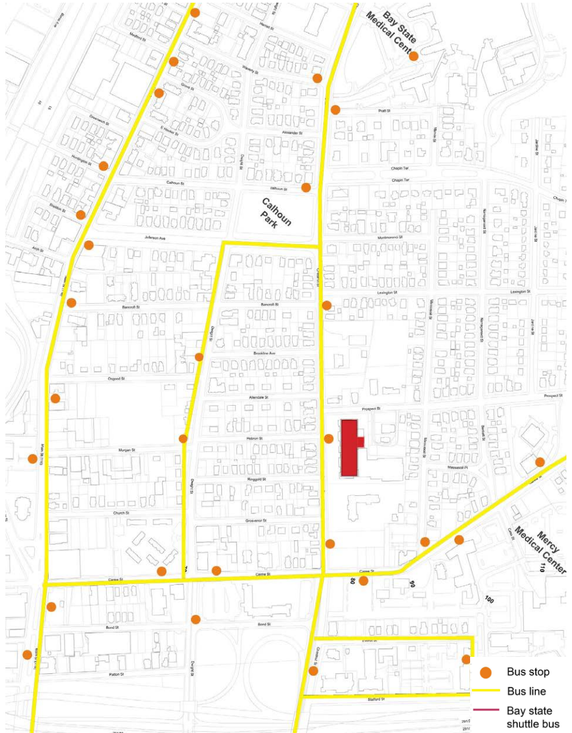


Bicycling on Main Street is dangerous. Narrow street sections should accomodate shared lanes for bikes and automobiles.

Landmarks, Street and Transportation System



The project area has many and diverse landmarks and destinations.



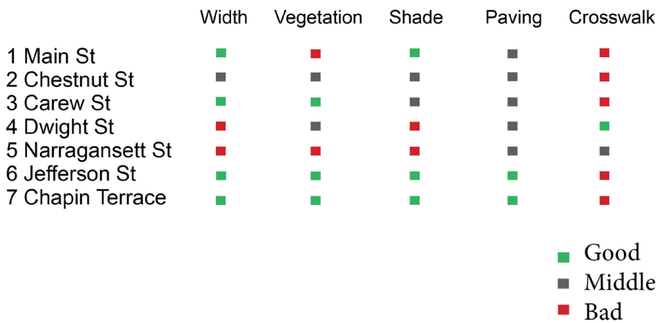
The area is well connected with the PVTA bus system. The schedules should expand later into the night to cater to medical workers that work at unusual times.

Comprehensive Streetscape Assessment

The analysis and assessment to the project area included various field trips to the area and systematic walking and mapping to comprehensively understand place. The comprehensive streetscape assessment was synthesized for the major street corridors: Main Street, Chestnut Street, Carew Street, Dwight Street, Narragansett Street, Jefferson Street, and Chapin Terrace. We categorized streetscape qualities such as width, vegetation, shade, surface quality and crosswalks. Some findings and general conclusions are: The neighborhood has a clear and legible street network. The streetscape could be more pedestrian and bicycle friendly. Major improvements are needed for street intersections with more crosswalks. Other interventions should accommodate the reduction of the design speed, for example through narrowing lanes and transformation of one-way primary corridors into two-lane streets.

The majority of the street segments are very wide - there is plenty or space for on-street interventions to improve safety, comfort, and add aesthetic quality. With the exception of Chapin Terrace and Jefferson Street all major streets need more large trees to provide shade in the summer. All major streets should accommodate bike-ways or bike lanes to encourage physical activity, add safety, and offer incentives for an alternative mode of transportation.

Major streets in the neighborhood.



Comprehensive streetscape assessment.


Main St


Main St


Chestnut St


Carew St


DwightSt


Dwight St


Narragansett St


Jefferson St

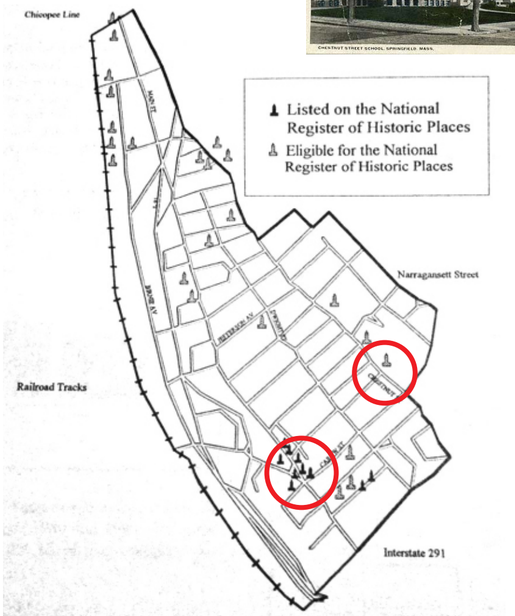

ChapinTerrace


ChapinTerrace

Selection of representative photos of the comprehensively assessed streets from the walking tours.

Historical Assets

Conserving and enhancing historic assets in the neighborhood is challenging. Many buildings that are listed 1994 do not exist any more. The historic Chestnut Street School was abandoned in the early 2000's and burned down on September 3, 2013. The historic Allis Mansion at the entrance of Mercy was destroyed on July 2, 2013 to accommodate a parking lot despite enormous protests from the Springfield Preservation Trust. Legible history it is essential to create a sense of place.



In 1994, 10 buildings in the area were listed on the National Register of Historic Places in the Memorial Square neighborhood. 12 additional sites were eligible in 1984, including Chestnut Street School. Source:1994 Report of Historical Assets in Memorial Square, from "Memorial Square Neighborhood"

Comprehensive Assessment of the Project Area

Observations and assessment of Initial Site Visit

Concerns

A. Poor Street Quality
- Speeding Traffic
- No Speed Limit
- Street Condition
- Wide Corridors
- Lack of Street Trees

B. Not Pedestrian Friendly
- Dark
- No Crosswalks/Crosslights
- No Shade/Trees
- Sidewalk Condition

C. Unappealing Views
- Parking Lots
- Fenced & Vacant Lots
- Visible Trash

D. Underutilized Spaces
- Unkempt, Vacant

E. Architectural Quality
- Dominant Architecture
- Out of Scale
- Abandoned Houses

F. Poorly Designed Gateway
- No Neighborhood Identity

Positive Observations

1. Well-Kept Residential
- Historic Architecture
- Landmark Structures
- Nearby Park Views
- Multi & Single Family

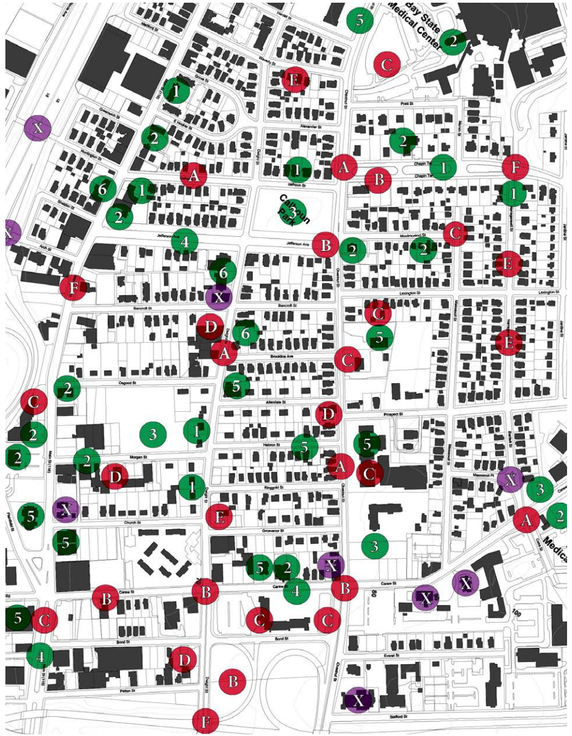
2. Commercial/Non-Profits
- Mc Donalds, TD/ATM
- New North C. C.
- Markets (Medina's)
- Well Used

3. Active Parks
- Benches
- Large Trees

4. Good Street Quality
- Pedestrian Access
- Grass Medians
- Maintained Sidewalks
- Well Used Bus Stops

5. Neighborhood Character
- Community Centers
- Religious Diversity
- Architecture Potential
- Good Views
- Colorful Buildings

6. New Apartment Buildings
- Multi-Family
- Safety
- Retirement Community



This comprehensive catalogue of concerns (red dots) and positive observations(green dots) was created and categorized to create a multi-faceted picture of our project area. It is noticeable that the concerns and positive observations are evenly distributed over the area. This catalogue created a framework for the further development of a design framework and program.

Expert Engagement with Stakeholders, Medical Students and Investors

The Graduate Studio held two envisioning workshops with stakeholders from the medical industry, the North End Community, the municipal Office of Planning and Economic Development, and students from the Baystate Health medical programs. We also met with potential investors - The Peregrine Group from Providence, RI and visited their revitalized, mixed use Rumford Center in Providence, RI. The following visions were identified through these mutual dialogue and established the design program and framework:

Amenities
- Gym & Spa
- Cafe/Diners (quiet area for sitting)
- Newspaper stand or small bookstore

Activities
- Live music venue for local bands
- Good ethnic restaurants
- A brewery with liquor license

Improved circulation
- Bike Lanes
- Hospital Shuttles
- Bus stop infrastructure and shelters
- Safe crosswalks
- Pedestrian & bike greenways

Shopping/Commercial
- New commercial clusters
- Small hotels in Victorian architecture

Housing
- Refurbished housing
- Affordability of rented housing
- Modern and sustainable architecture

Neighborhood identity
- Community Gardens
- Community art projects, local artists
- Signage to create identity

-Perceived safety
- Lighting & safe parking

Design Proposals Overview

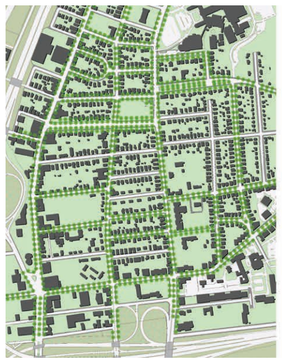
Team 1 • Samantha Anderson, Keith Hannon, Amanda Rookey • 26-43

Team 2 • Ivette Banoub, Trudy Hall, Irene Miller • 44-51

Team 3 • Ngoc Doan, Colin O'Donnell, Yan Xu • 52-66

Samantha Anderson • Keith Hannon • Amanda Rookey

This design proposal focuses on green infrastructure interventions, food security and scenarios for alternative energy resources in the neighborhood.



MASTER PLAN

CIRCULATION PATTERNS AND PARKING AREAS

URBAN GRAIN AND PROPOSED LAND USE

INFILTRATION OPPORTUNITIES AND MAJOR GREEN CORRIDORS

Samantha Anderson • Keith Hannon • Amanda Rookey

Team Master Plan and Focus Areas

Amanda Rookey - FRESH FOODS for Healthy Living

This proposal envisions a progressive focus on FRESH FOODS for Healthy Living. The major design elements are:

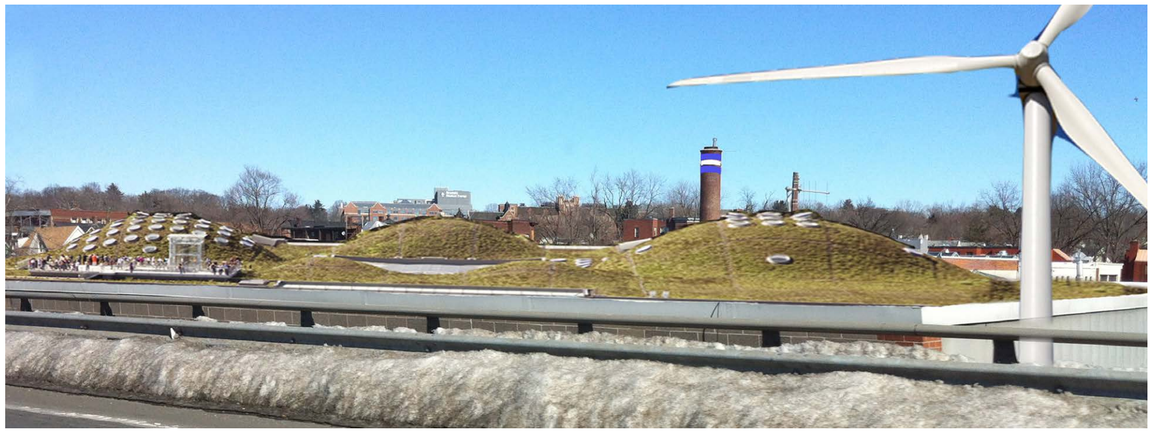
- All-Season Farmer's Market + Walkable, Bikeable Streets
- Community Garden Trail
- Green View Roofs
- Stormwater Infiltration
- 1-Story Family Homes as infill
- Vibrant Public Art

This corner in a residential area of East Hooker Street/Main Street is re-purposed to provide fresh produce and an opportunity for new entrepreneurs. A vacant corridor east of Main St. is transformed into a community gardening strip.

Amanda Rookey - Site Plan

Design concept plan with major interventions.

The historic building of the PVTA administration and the adjacent bus garages are transformed into a green Campus. The flat roofs of the garages are transformed with a sculptural, undulating landscape and create a GREEN landmark.



The GREEN landmark building is a legible landmark from I - 91. Alternative uses of energy respond to climate change and introduce post-oil strategies.

Keith Hannon - Green Infrastructure and Bicycling on Jefferson Avenue

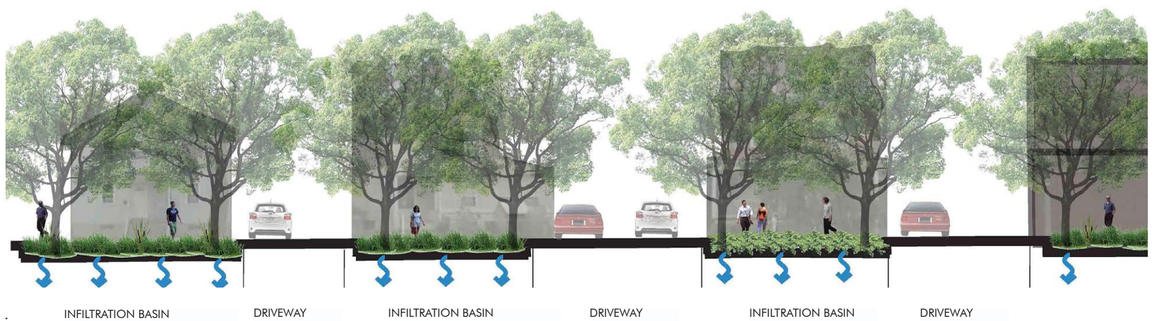
The interventions of this proposal pursue the following goals:

- Pedestrian friendly streets along Jefferson Ave and Main Street featuring small car lane widths, curb bulbs, better tree canopy coverage, and bike lanes.
- Mitigate stormwater runoff by using permeable paving for street parking areas along Main St. and Jefferson Ave and large bio-infiltration basins along Jefferson Ave.
- Create bike lanes on Main St. and dedicated bike lanes along both sides of Jefferson to increase safety.
- To Make walking or biking down Jefferson Ave a more enjoyable experience through the use of more street trees and vegetation in the proposed bio-infiltration basins.
- Create more mixed use along Main St near Jefferson Ave including a new market that carries more staple food items.

View of Main Street facing north. The gardens on the rooftops create a new and unique architectural typology in Springfield, increase property value and improve the urban climate.

Section across Jefferson Avenue facing Main Street.

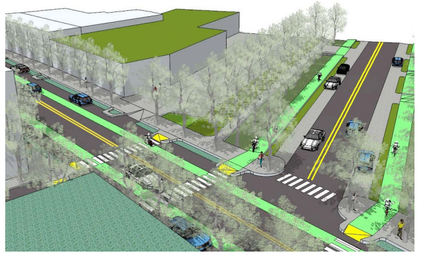
Design concept plan with major interventions.



Section along Jefferson Avenue facing south. A series of infiltration basins along the street introduce a strategy to cleanse stormwater and reduce pollution of the Connecticut River Watershed.

Keith Hannon - Green Infrastructure and Bicycling on Jefferson Avenue and Main Street

View of Jefferson Street facing east. Bike lanes and cross walks make add public safety.



View of Jefferson / Main Street.

New businesses will occupy vacant lots and buildings on Main Street and create a vibrant atmosphere.

Keith Hannon - Green Infrastructure and Bicycling on Jefferson Avenue and Main Street

Pedestrian crossings and bike lanes encourage physical activities and reduce the need for cars.

Samantha Anderson - The Gateway to Baystate Hospital at Chestnut Street

Baystate Students claim that they don't usually have enough time to leave the campus during the day, even during lunch breaks. If medical students don't have time to walk to Main Street during their work day, we propose bringing Main Street amenities to the front door of Baystate Campus, creating a pocket of mixed use commercial-residential activity.

The primary goals for this focus area are:

- Bring Main Street-Type amenities relevant to the Baystate Community and to the Baystate entrance
- Celebrate well maintained Victorian architecture by redeveloping existing buildings into mixed use buildings.
- Green Infrastructure along streets to mitigate stormwater runoff
- Pedestrian friendly streets featuring small car lane widths, better tree canopy coverage, bike lanes, lighting, and seating

Narrowed travel lanes and designated parallel parking utilizing curb bulbs will slow down traffic and make room for bicycle lanes and wider planted medians. Planted medians can provide space for stormwater infiltration and areas for outdoor seating. Permeable pavers on pedestrian routes and parking spaces can also help to facilitate infiltration. More seating, better lighting, and more crosswalks can make Chestnut Street more pedestrian friendly, and entice customers to first floor commercial businesses. New business in modified residential homes should cater to Baystate employees and visitors, businesses such as bakeries, restaurants, convenience stores, florists, and bed and breakfasts.

Samantha Anderson - Site Plan

Chestnut Street as it exists today has unnecessarily wide automobile travel lanes, allowing for easy speeding and difficult pedestrian street crossings. Buildings in the vicinity of Baystate are mostly residential.

Design concept plan with major interventions.

EVENING DINING WITH SEASONAL OUTDOOR SEATING
PARALLEL PARKING/INFILTRATION

EVENING DINING WITH SEASONAL OUTDOOR SEATING
PARALLEL PARKING/INFILTRATION

More lighting and outdoor seating can make Chestnut Street a vibrant community even in the evening. Baystate employees often have erratic work schedules, and could contribute economically to new food related businesses outside the normal workday.

Samantha Anderson - The Gateway to Baystate Hospital at Chestnut Street

OUTDOOR SEATING

FOOD TRUCK
PARALLEL PARKING/INFILTRATION

BED AND BREAKFAST

Samantha Anderson - Activation of the Calhoun Park Border

A popular amenity at the nearby Jaime Ulloa park, game tables provide programmed and unprogrammed space in a park, helping to attract visitors. Currently an underutilized area, introducing game tables and seating areas to this corner of Calhoun park could entice visitors to sit and stay.

Samantha Anderson - Baystate Hospital Infiltration Gateway

Currently an underutilized green space, activating this area with outdoor seating will bring Baystate employees, visitors, and neighbors to the threshold of Baystate's Campus, and in conjunction with new commercial activities in nearby buildings, can help bring economic vitality to this area of Chestnut Street.

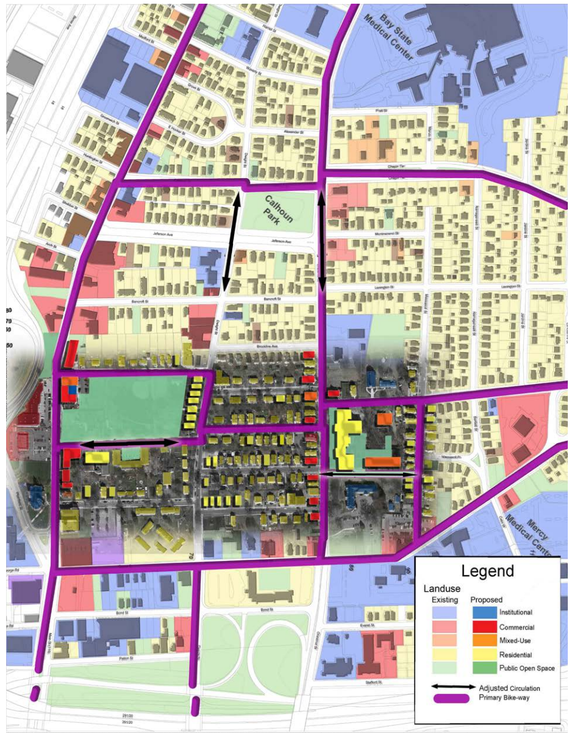
Installing an infiltration landscape by Baystate's main entrance can help mitigate stormwater runoff from neighboring parking lots. Stormwater runoff, which currently contributes to Combined Sewer Overflows, is an expensive issue Springfield is trying to remediate. In addition, this landscape can act as a comfortable outdoor seating area for Baystate employees on lunch breaks.

Ivette Banoub • Trudy Hall • Irene Miller

The Springfield North End sits at the heart of a series of area assets, Baystate, Mercy, and Shriners, as well as other medical offices, Main Street, and vicinity to Downtown Springfield. The goal of the design is to create connections between these assets and thereby bring vitality back into the neighborhood. One of the core connections for this can be found along Chestnut Street. This street artery connects to the Interstate 291, Baystate, and Mercy.

After meeting with the medical students and stakeholders the team identified Jaime Ulloa Park as an under-used asset for the area. The City of Springfield takes pride in their parks, however a lack of awareness results in limited use for Jaime Ulloa so the team used Jaime Ulloa to function as a gateway for the North-South connection. The medical students also voiced concerns over lacking amenities and therefore the team used the designed corridors as locations for neighborhood amenities.

In conclusion the team created stronger neighborhood connections between destinations, and used the park and amenities to help draw people along these connections. An important example is the redesign of the edge of Jaime Ulloa park at Morgan Street after the Dutch Woonerf model. The new design will facilitate walking and bicycling from Main Street to the proposed housing development at Chestnut Street and vice versa.



Proposed framework of future land uses in the area.

Ivette Banoub • Trudy Hall • Irene Miller

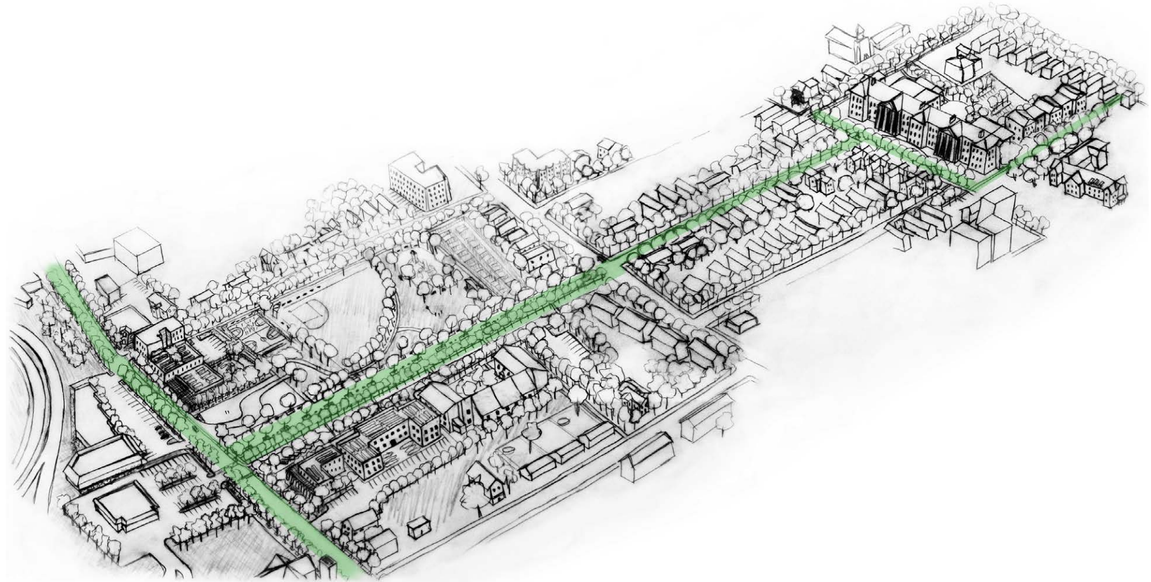
A large scale overview of the site illustrates the key destinations and corridors. The diagram also illustrates the team's interventions.

Below, Morgan Street has been re-imagined along the Dutch Woonerf Street model. Priority is given to the pedestrians, and though cars are still allowed access to the street, they are required to slow down and make way for pedestrians and bicyclists. Morgan Street has been built into an entirely residential street of apartments that have visual access to the park. Adjacent to Morgan Street are more game tables and a corridor that leads directly to the new development at the former Chestnut Street School. Finally, an interactive stormwater management detention ponds included in the Jaime Ulloa Park. The re-envisioned Morgan Street has limited vehicular circulation and is primarily for pedestrians, strengthening the concept of the North End as a walkable area.

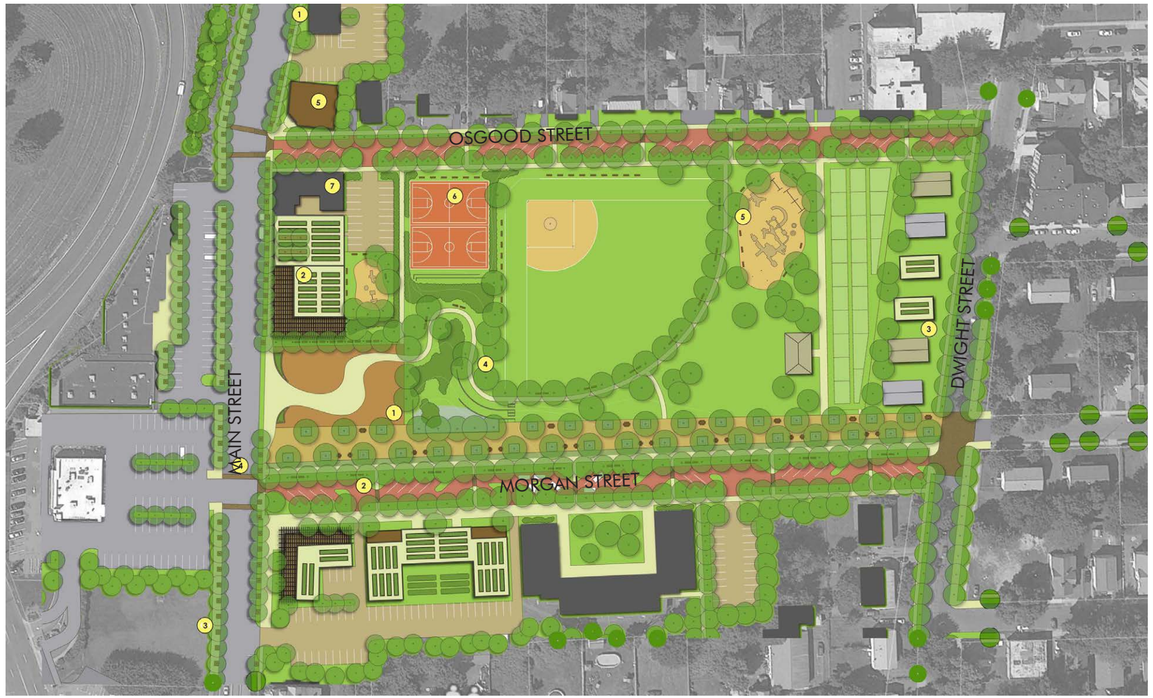
Morgan Street is envisioned as a street that gives priority to pedestrians after the Dutch Woonerf Street model.

The design team reviewed circulation and natural processes that informed the team's decisions when choosing focus areas as well as making design decisions especially in regards to circulation and BMP integration.

Ivette Banoub • Trudy Hall • Irene Miller - Green Connection from Main Street to Chestnut Street



We envision to create a walkable corridor that connect Chestnut Street to Main Streets and stitches east and west together.



The proposed plan revitalizes Main Street by adding updating existing architecture and building new businesses in abandon lots. It also adds street trees to make the area more walkable as well as incorporating BMPs and highlighting destinations and gateways. Jaime Ulloa is park located adjacent to Main Street and connects to the proposed development at the former Chestnut Street School lot. Today it is underutilized park that has yet to live up to its potential. Currently the park functions more as a place for people to cut through from Morgan to Osgood Street. The most successful element of the park is the gaming tables located along Morgan Street. The new park also functions as a stormwater education area. By reconfiguring the park it allows for the creation of a visual corridor from

Ivette Banoub • Trudy Hall • Irene Miller - Green Connection from Main Street to Chestnut Street

Main Street along Morgan Street, crossing Dwight Street, and then Hebron Street all the way up to Chestnut Street. The new design of Hebron Street street takes advantage of the existing width by enlarging the BMP planting strips without interfering with residents'' property. At the same time, the narrower roads will function to limit traffic speeds and increase pedestrian safety. Chestnut Street has been narrowed and a wider shared-use pedestrian and bike corridor has been added. Street trees have also been planted, and finally the property in front of the school has been designed to function as gathering areas as well as a stormwater management system.

Ivette Banoub - Expanding Mixed Use and Tree Plantings on Main Street

Main Street is the current primary destination for shopping, food, and other businesses within the North End. Currently the street is a mix of business, empty or abandoned lots, and residential structures. The buildings are 1 to 4 stories, though predominantly 2 stories high. Currently there is plenty of parking but the walkability of Main Street is less than ideal. Street trees are inconsistent and not well maintained, sidewalks are unclear, and there are no buffers between different types of traffic. Finally Main Street does not take advantages of the connections is provides to other neighborhood amenities.
The proposed plan revitalizes Main St by adding updating existing architecture and building new businesses in abandon lots. It also adds street trees to make the area more walkable as well as incorporating BMPs and highlighting destinations and gateways.

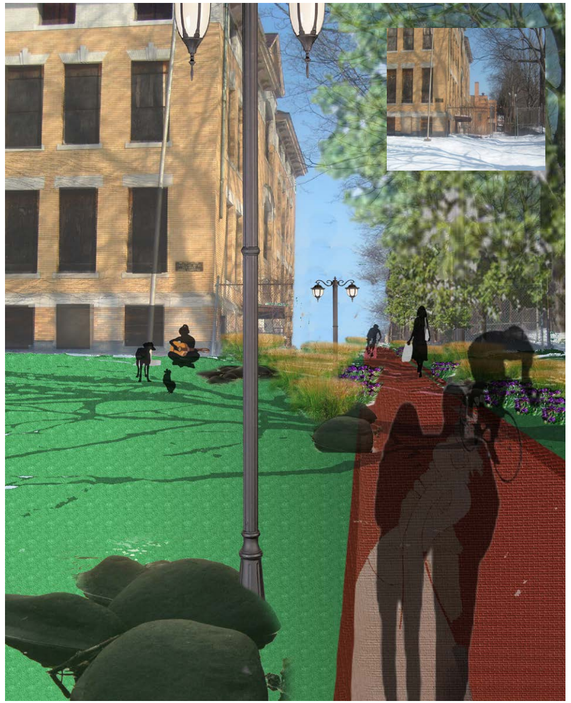
Main Street already has some of the infrastructure needed to create a lively comfortable destination for residents and visitors, and what is currently lacking in amenities can be introduced in any of the multiple existing vacant lots.
Here, an existing residential and business building and a day-care structure have been cleaned up, and a cafe has been added so that is sits adjacent to the park and thereby takes advantage of both its location on Main Street and its views into the park. In addition paving has been changed into more permeable options and trees in tree grates have been added to the street to give shade and edge, but not take away from the walking space of the pedestrians.

This existing building at the edge of Morgan Street and Main Street holds a residential uses. The day care center expanded and has direct accessibility to Jaime Ulloa Park. A proposed small cafe takes advantage of its ideal location at the edge of the park.

Trudy Hall - Chestnut Street School

Short term interventions such as street light art draws people to the street and shows them that the area is safe and changes the overall perception.

After steps have been taken to change people's perceptions more long term interventions can be introduced such as proposing a two-way Chestnut Street, bike-lanes, and street trees for greater pedestrian comfort.

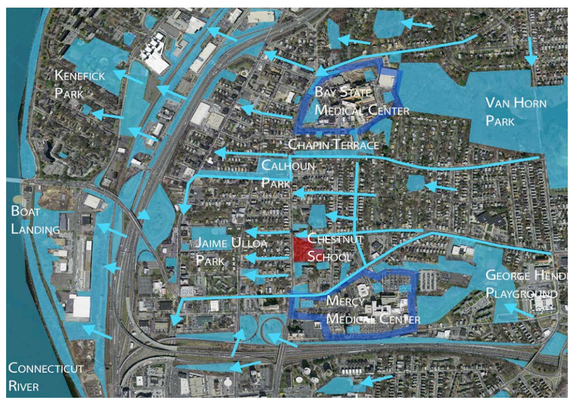


Since the Chestnut Street School block has the size of two blocks a pedestrian corridor has been added next to the school to allow for greater connectivity to Massasoit Street and up to Shriners Hospital. This corridor has resting spots and overall allows for greater pedestrian access to the neighborhood.

The big idea for this collaborative design is to revitalize the neighborhood by creating greenway connections in our design area in Springfield with bike and pedestrian friendly corridors. Our design area is isolated by I-91 and I-291 where the only accessibility is vehicular. We strengthened important arteries to help connect this neighborhood to the rest of Springfield. Using the Chestnut Street School redevelopment as a major hub in the neighborhood, we proposed mixed use and have designed pedestrian friendly connections to Bay State Medical Center, Mercy Medical Center, and Main Street for future residents. Our team had the challenge of keeping Chestnut Street and Dwight Street one-way streets, which gave us the opportunity to strengthen the streetscape and provide stormwater management.

This design also implements new business areas strategically placed to draw medical employees into the neighborhood and also provide amenities requested from targeted future inhabitants. In conclusion, we proposed strong connections between the two large medical centers by bringing in different amenities in order to attract a diverse group of future residents to the North End of Springfield.

Open Space: The team proposes to connect the existing parks to the larger context and create strong corridors with vegetation to alleviate urban heat affect and lead people to green spaces.

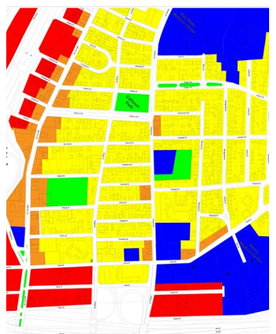


Hydrology: The team proposes reducing runoff from the upper terrace to help improve the Connecticut River with various Best Management Practices. Provide new aesthetic quality to the neighborhood in order to improve the quality of life for the residents.

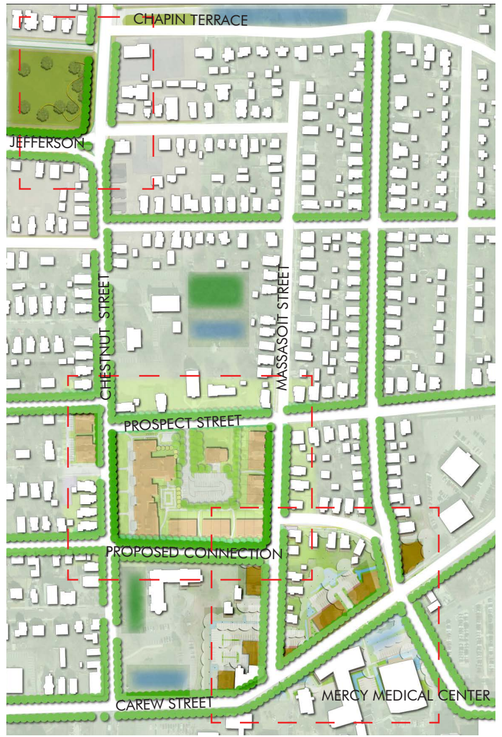
Ngoc Doan • Colin O'Donnell • Yan Xu - Green Arteries from Baystate Hospital to Mercy Medical Center

Proposed Urban Grain

Proposed Public Open Space System

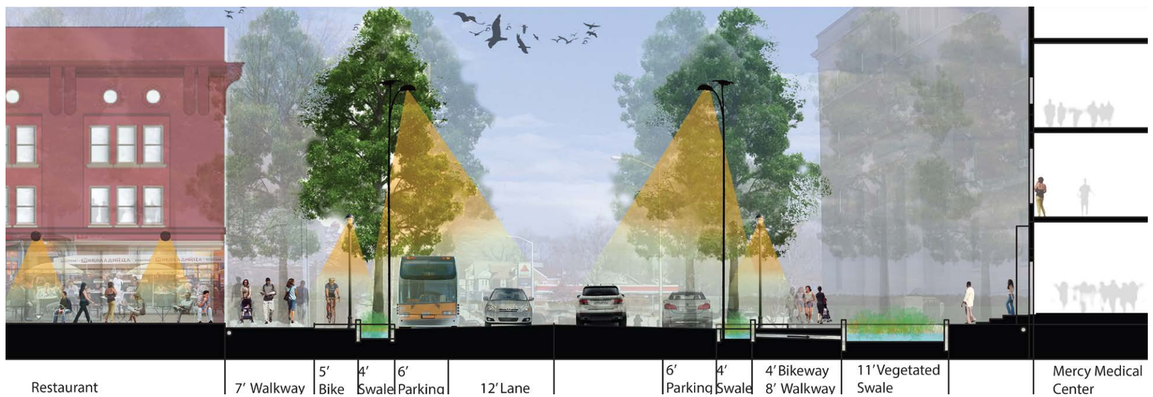


Proposed Land Use



Master Plan and Focus Areas

Many visitors arrive at the Mercy Medical Center. This focus area plays an important role in showcasing the identity of the North End. Currently, a sense of a welcoming gateway is missing. A number of elements such as vacant lots, unkempt houses, big parking lots, and lack of greenery detract from property values and create unsafe settings. Thus, the design concept is to create a stepping stone connection to the neighborhood in the North End of Springfield. Bringing in mixed use commercial blocks in order to offer a new identity and gateway to connect the Mercy Medical Center to the rest of the neighborhood. The goal is to provide aesthetic qualities with green infrastructure, highlight the neighborhood culture with ethnic restaurants, offer pedestrian friendly corridors, and essentially bringing in economic vitality to the neighborhood for the future. Moreover, this is the first stepping connection to the new Chestnut Street School development. Finally, this is an important connection to bringing a diverse group of people into the neighborhood in the future.



This section elevation shows an evening scene of a vibrant Carew Street. This can be an exciting green corridor not only for pedestrians and bicyclists, but as well as a major destination for medical employees during off times.

Design concept plan with major interventions.

Massasoit Street

Massasoit Street

Carew Street

These perspectives show early stages of utilizing vacant lots and wide corridors such as community garden and bikeway friendly routes on Massasoit Street and Carew Street.

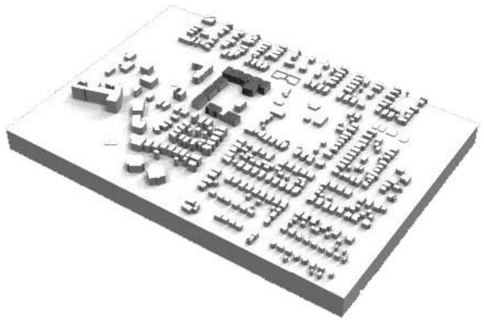
A completed scenario of Massasoit Street with green infrastructure interventions: Infiltration strips, permeable paving in the parallel parking spaces, two-way bike lanes, tree plantings, and street lighting.

Carew Street

This section elevation shows the new commercial and mixed use section elevation on Carew Street. New Puerto Rican, coffee shop, flower shop, and medical offices are all within close proximity to the Mercy Medical Center.

A completed scenario of Carew Street with green infrastructure interventions and mixed-use infill development that caters to the visitors of Mercy Medical.

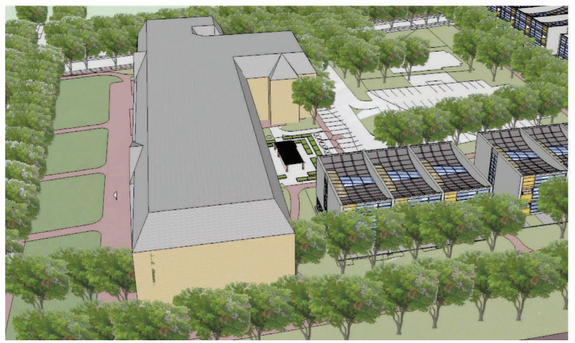
This area focuses on the Chestnut Street School block and how that area could enhance the overall neighborhood. The main idea that influenced this design is the conversion of the school into market rate housing, and what types of needs those residents will require in the future. New row housing is proposed, in an area of vacant lots and housing in disrepair, to bring in a broader more diverse range of residents in the neighborhood and will provide a contrast to the historic school architecture. In order to help connect the residents of the new housing to the hospitals and the rest of the neighborhood, a new pedestrian and bike oriented road will split the existing long block into two short blocks. The row housing and school create an enclosure to frame the parking area and provide privacy for individual back yards and community garden that provide different levels of privacy. In order to help provide certain amenities to all the residents of the community, new areas for business have been created in pockets along Chestnut Street. In this particular new business area, a new coffee shop and Latino sandwich shop will fill out the block face. This design adds opportunity for new residents to move into the neighborhood, but does not disrupt the neighborhood as a whole. This design also helps add identity to a major artery that runs through the entire city of Springfield.



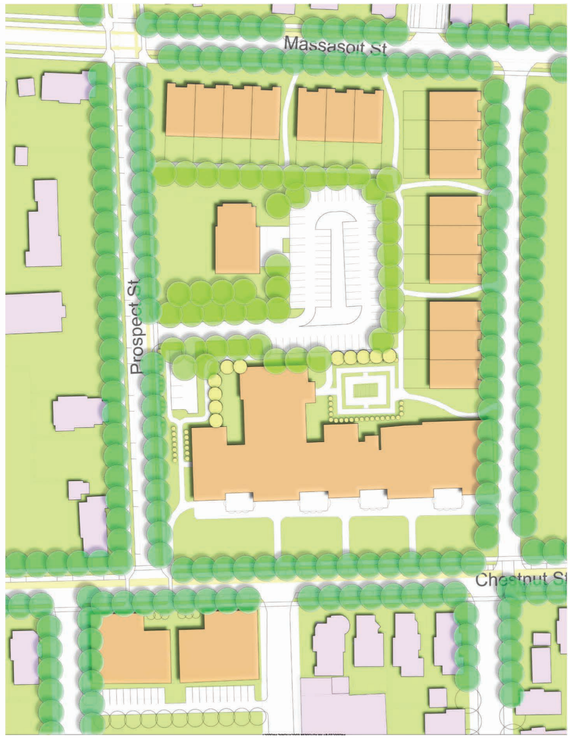
The new connector street from Chestnut Street to Massasoit Street.
The proposed, sustainable, market-rate housing development on the right.

Colin O'Donnell - New Housing Opportunities and Green Infrastructure on the Chestnut Street School Block

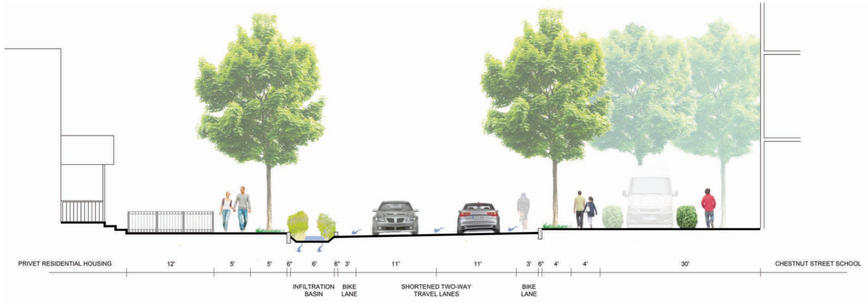
The private courtyard accommodates a shared garden space and surface parking for the residents.

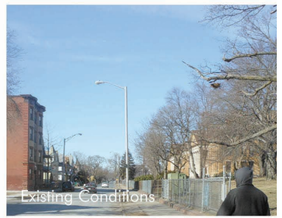


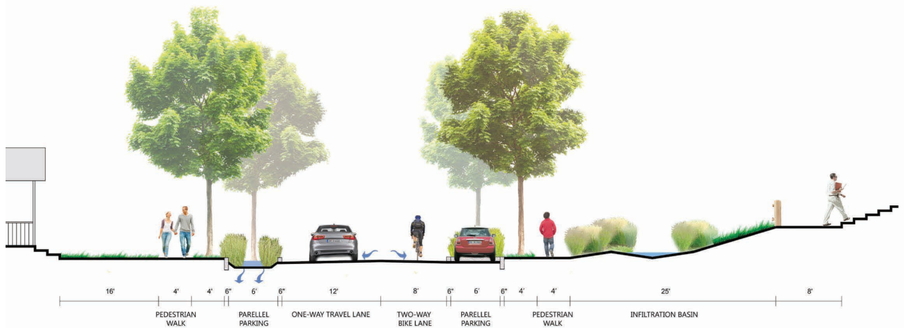
The architecture of the proposed row houses contains solar panels and will introduce an new and exciting architectural typology to Springfield.



Design concept plan for the Chestnut School block.







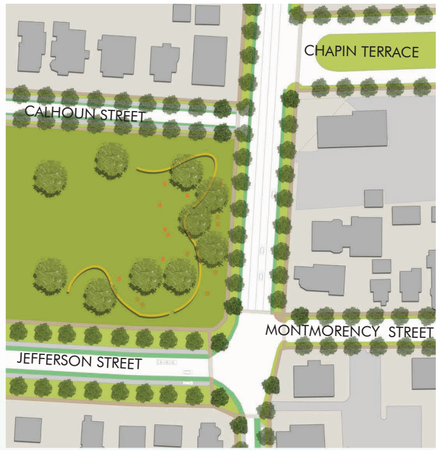
These sections show the transformation of the streetscape between Chestnut Street (above) and Prospect Street (upper op). By adding street trees, bike lanes and infiltration basins, the whole character of both streets change dramatically.

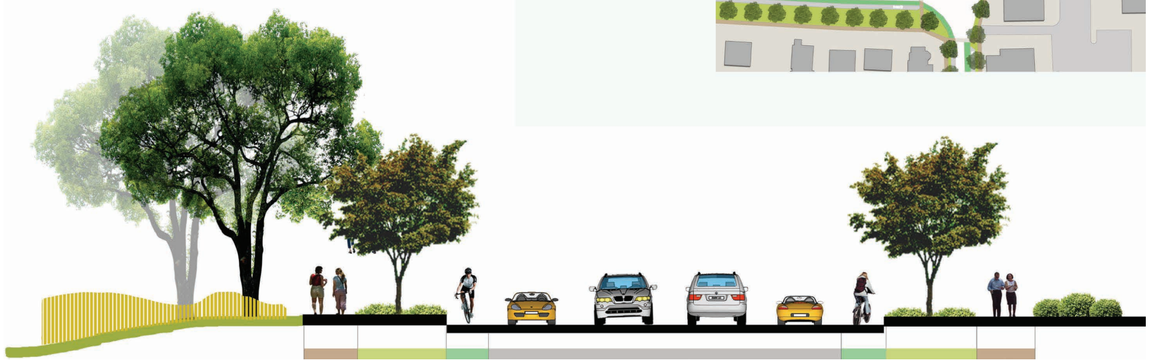
Colin O'Donnell - New Housing Opportunities and Green Infrastructure on the Chestnut Street School Block

Future Chestnut Street with bike land and infiltration strip.

The new connector street from Chestnut Street to Massasoit Street.

This focus area is located right next to the Baystate Medical center and Chapin Terrace. What we are trying to do is make the space more inviting to the workers and families and improve the walkability in the area. This area is the gateway of Chestnut Street. The edge of Calhoun Park will be redesigned with sitting areas and a gathering space. An artistic structure defines the new edge. It might also create save place form the traffic form children to play around. Picnic tables and benches for daily use are proposed. This is a nice place for the workers and family to enjoy their outdoor lunch. Chestnut Street will be a complete street with dining, shopping, plants and opportunities for social interaction. Planters on the street buffer pedestrian from traffic as well as provide infiltration water management. Therefore, the green corridors create new identity for the area.

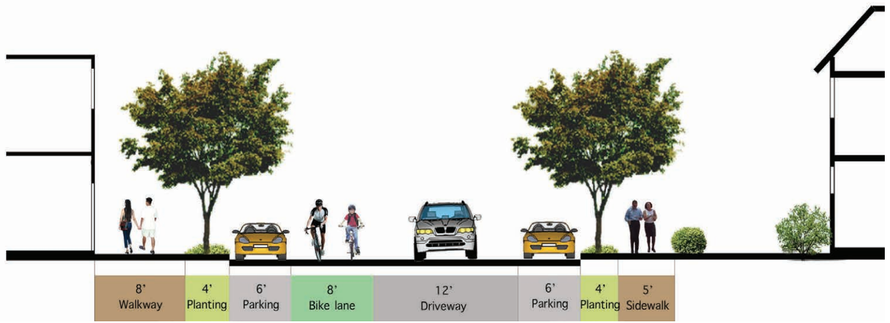




Section of Chestnut Street facing north. The redesigned edge of the Calhoun Park contains public art as a joyful element for play and interaction.

View into the redesigned edge of Calhoun Park.

Small-scale commercial infill development is proposed on Chestnut Street to create more livability in the area.



Section of Chestnut Street as a one-way street with bike lane and large tree plantings.

Previous studio work:

- "Reconnecting People to Springfield's Riverfront: from the South End to Forest Park", UMASS Amherst Design Center, Urban Design Studio Fall 2011, LA 497 A
- "Creating Livable Neighborhoods in Old Hill and Six Corners", Spring 2011, Graduate Urban Design Studio, LA 604
- "Springfield`s Upper Lyman Warehouse District Visions for Revitalization", UMASS Amherst Design Center, Fall 2010, Senior Urban Design Studio, LA 497 A
- "From the Quadrangle to the River", Spring 2010, Graduate Urban Design Studio, LA 604A
- "Making Connections – Envisioning Springfield's North End", Fall 2009, Senior Urban Design Studio, LA 497 A
- "Revitalizing the South End – The Gateway for Downtown Springfield", UMass, Spring 2009, Graduate Urban Design Studio, LA 604
- "Designing The ARC OF RECREATION – The Railroad Corridor from Armory Street to State Street", UMass, Fall 2008, Senior Urban Design Studio, LA 497 A
- "Designing the Crossroads of Mason Square – Railroad Corridor meets State Street Corridor", UMass, Spring 2008, Graduate Urban Design Studio, LA 604

Other Sources

Bacon, Edmund N., Design of Cities, Penguin, 1967
Crete, Lau, Hutchinson, Shaw, "Building Community Through Landscape, Springfield MA", Documentation of analysis and proposed master plan, University of Massachusetts, 2009
Forsyth, A. (2006). "Urban Centres in Universities: Institutional Alternatives for Urban Design", Journal of Urban Design.
Forsyth, A., Lu, H., & McGirr, P. (2000). "Service learning in an urban context: Implications for planning and design education", Journal of Architectural and Planning Research.
Hester, R. T. (2006). "Design for ecological democracy", Cambridge, MA: MIT Press.
Jacobs, Allan B., "Great Streets", MIT Press, 1993.
Jacobs, Jane, "The Death and Life of Great American Cities", Random House, New York, 1961
Kostof, Spiro, "The City Shaped, London", Thames & Hudson, 1991
Krier, Rob, "Urban Space Rizzoli", New York, 1979
Kriger, Alex, Andres Duany and Elizabeth Plater-Zyberk, "Towns and Town-Making Principles", Harvard GSD, 1991.
Larice, Michael, and Elizabeth McDonald, "The Urban Design Reader", New York, Routledge, 2007.
Lynch, Kevin, "Image of the City", MIT Press, Cambridge, MA MIT Press, 1960.
Meyer, E., "Sustaining Beauty: the Performance of Appearance", Journal of Landscape Architecture, Spring 2008.
Sitte, Camillo, "The Art of Building Cities", Reinhold, 1945.
Spirn, Anne Whiston, "The Granite Garden: Urban Nature and Human Design", New York: Basic Books, 1984.
Sleegers, F. and E. Brabec. "Linear Infiltration Systems along Urban Streets: Evaluating Aesthetic Values" Journal of Landscape Architecture, Spring 2014.
Sleegers, F. and J. Taylor. "The Evolution of an Urban Design Curriculum in Landscape Architecture and a Community-Based Design Center" Journal of Community Engagement and Higher Education, Spring 2014.
Sleegers, Volpe et al. "Brickbottom Urban Design Somerville, Massachusetts, Edge as Center", 2006.
Steiner, F. & Butler, Kent, "Planning and Urban Design Standards", Wiley, Hoboken, 2007.
"Urban Pioneers – Temporary Use and Urban Development in Berlin", Jovis, 2007.
Waldheim,C. ed. (2006) "The Landscape Urbanism Reader", New York, Princeton Architectural Press.
Weller, R. (2008): "Landscape (Sub)Urbanism in Theory and Practice" Landscape Journal.