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

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Samantha Anderson • Ivette Banoub • Ngoc Doan • Trudy Hall • Keith Hannon • Irene Miller • Colin O’Donnell • Amanda Rookey • Yan Xu
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.
# The Revitalization of Springfield's 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

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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 student and local expertise 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, 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 mindset 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 employer 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 former 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.

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.

The 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.
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 from 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

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

The median household income in 2009 of the North End Neighborhood is low. Almost 50 % of the households live below the poverty level.
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 to 150’ 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.

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.

Hydrology, Stormwater Management, Impervious Surfaces and Topography

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

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

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 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 neighborhoods. The former Chestnut Street School lot leaves a large portion of the neighborhood. These houses detract from property values and the aesthetic value of the neighborhood, and are underutilized spaces. Pocket gardens and boarded up houses are scattered throughout the neighborhood. These houses detract from property values and the aesthetic value of the neighborhood, and are underutilized spaces. Pocket gardens

Conclusions:

- A band of industrial zoning and highway-oriented commercial zoning emphasizes the barriers created by the highway systems, separating the North End from the downtown and Brightonwood neighborhoods. Callahan 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 medical facilities are legible in the north and south.
- There are no activities later in the evening or at night. 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.
- Vacant lots appear throughout the neighborhood. These houses detract from property values and the aesthetic value of the neighborhood, and are underutilized spaces.
- Boarded up houses are scattered throughout the neighborhood. These houses detract from property values and the aesthetic value of the neighborhood, and are underutilized spaces.
- The zoning concurs with the land uses. The large-scale medical facilities are legible in the north and south. The zoning concurs with the land uses.
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.

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 accommodate shared lanes for bikes and automobiles.

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 of 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.

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<th>2 Chestnut St</th>
<th>3 Carew St</th>
<th>4 Dwight St</th>
<th>5 Narragansett St</th>
<th>6 Jefferson St</th>
<th>7 Chapin Terrace</th>
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<td>Paving</td>
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Comprehensive streetscape assessment.

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

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/Flashing Lights
- No Shade/Street 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
- McDonalds, 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

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 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 is essential to create a sense of place.

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

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

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

Team 3 • Ngoc Doan, Colin O’Donnell, Yan Xu • 52-66
This design proposal focuses on green infrastructure interventions, food security and scenarios for alternative energy resources in the neighborhood.
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.

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

Amanda Rookey - FRESH FOODS for Healthy Living
Amanda Rookey - A Vibrant, Green PVTA Campus

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

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.

View of Jefferson Street facing east. Bike lanes and crosswalks 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.

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

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 enticing 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.

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 enticing 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 - The Gateway to Baystate Hospital at Chestnut Street

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

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.
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 - 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.

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.

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.

Existing Conditions

Samantha Anderson - Baystate Hospital Infiltration Gateway
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.

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

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.

We envision to create a walkable corridor that connect Chestnut Street to Main Streets and stitches east and west together.
Ivette Banoub • Trudy Hall • Irene Miller - Green Connection from Main Street to Chestnut Street

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 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 advantage of the connections it provides to other neighborhood amenities. The proposed plan revitalizes Main St by adding updating existing architecture and building new businesses in abandoned 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 it 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 Ullioa Park. A proposed small cafe takes advantage of its ideal location at the edge of the park.
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

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.
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.

Ngoc Doan - A Green Infrastructure Gateway for the Mercy Medical Center

Design concept plan with major interventions.
These perspectives show early stages of utilizing vacant lots and wide corridors such as community garden and bike-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.
Ngoc Doan - A Green Infrastructure Gateway for the Mercy Medical Center

Existing Conditions

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

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.

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.
Yan Xu - Public Art at Calhoun Park

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 a safe place for 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 pedestrians 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.
Yan Xu - Mixed Use Infill Opportunities on Chestnut Street

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.

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