Spring 2015

NO SPACE LEFT BEHIND - Graduate Urban Design Studio - LANDARCH 606

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Counihan, Christopher H.; Hisle, Matthew R.; Lu, Yanhua; Mao, Maozhu; Marques Jordao, Emilie; Prendergast, James S.; Stoddard, Michalagh C.; Tang, Ruoying; Wang, Jing; Ward, Nelle Katharine; Yang, Yuqing; Yang, Yi; Yu, Yu; Fenton, Kellie; Li, Yue; and Wu, Yuqing, "NO SPACE LEFT BEHIND - Graduate Urban Design Studio - LANDARCH 606" (2015). Landscape Architecture & Regional Planning Studio and Student Research and Creative Activity. 45.
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Revitalizing Springfield’s Metro Center through Tactical Urbanism

Chris Counihan • Kellie Fenton • Matt Hisle • Ian Kolesinkas • Yue Li • Yanhua Lu • Maozhu Mao • Emilie Jordao
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UMass Amherst Design Center in Springfield
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MLA Urban Design Studio Spring 2015
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Sponsored by
The City of Springfield Office of Planning and Economic Development and the U.S. Department of Housing and Urban Development

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Editing: James Prendergast and Frank Sleegers
Printed: 2015
INTERVENTIONS AND DESIGNS BY TEAM

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ACKNOWLEDGEMENTS

The Department of Landscape Architecture and Regional Planning and their UMass Amherst Design Center continued the successful collaboration with the Office of Planning and Economic Development of the City of Springfield in the spring of 2015. The studio was sponsored through the City of Springfield and the US Department of Housing and Urban Development.

This Graduate Urban Design Studio sought to look at ways to enliven public space with small-scale urban design interventions in the downtown area. This unconventional approach is often called "tactical urbanism" and consists of projects that are temporary and easy to accomplish. Our studio focused on overlooked spaces and imagined how to shape these various spaces for their revitalization. Our class was able to install six projects within the Central Cultural Walking District as ways to engage people and become part of a long-term vision for Springfield.

We are grateful to Mayor Dominic Sarno for his ongoing support of the UMass Amherst Design Center in Springfield. We sincerely thank Scott Hanson from the Springfield Office of Planning and Economic Development for his unerring enthusiasm and great cooperation through all stages of this project. We are most thankful to Kate Moonan, Director of the Springfield Central Cultural District, to coordinate and support our efforts. We thank our experts and stakeholders to provide productive feedback for our preliminary ideas: Brian Connors and Phil Dromey - Planning and Economic Development; Phil Burdick - Springfield resident, Demetrios Panteleakis - Opal Real Estate, Bill Malloy - Concerned Citizen, Bob McCarthy - Historical Commissioner, Jay Minkarah - DevelopSpringfield, Wayne Phaneuf - The Republican, Evan Plotkin - NAI Plotkin Real Estate, Catherine Ratté - PVPC, and Chris Russell Springfield - BID.

We thank the Junior Landscape Architect students for generously donating their self-crafted chairs and benches to provide sitting opportunities at Apremont Triangle during our intervention day.

Mike Abate, Mark Gullifer, Blad Hernandez, Alex Hentnik, Nick MCMenamin, Cameron Roach, Taylor Shulda and Andrew Woodward. This furniture was created in Professor Carolina Aragon’s studio in the fall of 2013 and 2014.

We would also like to thank Focus Springfield Community TV for hosting our reception, we thank 21st Century Baystate Springfield Educational Partnership within the Afterschool Program at the Putnam Vocational Technical Academy and their 9th grade students, for creating and installing our art work at Pynchon Plaza, especially Milannie Betancourt to share her experiences, and also educator Rashonda DeGraffenreid.

We thank Michelle Laplante from the Backstreet Bistro on Market Place for her hospitality and generosity. We further thank New England Public Radio for featuring our walk and capturing the voices of the city, WGBY for broadcasting our event on TV, MassLive.com for covering our creative approach in the local media, and all the visitors and residents that enjoyed our activities.

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

Finally, we thank all our students of the Urban Design Studio for their great work to develop and realize ideas for the City of Springfield. They resisted the cold spring weather conditions and worked outside at day and night.

We are especially thankful to James Prendergast for his creativity compiling and editing this comprehensive report.

Frank Sleegers
Professor and Studio Instructor, Director Community Service Learning UMass Amherst Design Center

Michael Di Pasquale
Professor and Studio Instructor, Executive Director UMass Amherst Design Center
The following report documents the work of the 2015 Spring Graduate Urban Design studio course of the University of Massachusetts-Amherst Department of Landscape Architecture and Regional Planning. This fourteen week studio focused on using tactical urbanism to engage Springfield’s Metro Center neighborhood with visions to revitalize the downtown core of this legacy city.

In addition to completing the components of a traditional urban design studio (site analyses, schematic plans, spatial designs, and programming), the student teams also developed conceptual projects to immediately engage the public. These efforts culminated in a free afternoon walking tour throughout the Metro Center that presented several tactical interventions. These interactive, public installations illustrated potential future initiatives and brought attention to overlooked areas and assets.

Throughout the semester the teams were challenged to continuously consider both the short-term impacts of their interventions and the long-term visions for the future of Springfield’s urban core. This strategy allowed students to develop a process-based approach to urban design. It provided opportunities to engage stakeholders and test new ideas with the public, rather than simply creating a master plan without any real-world interactions with the city and its populace.

STUDIO GOALS
• To enliven public space in Springfield’s Metro Center through small-scale urban design interventions which illustrate and inform long-term plans
• To activate residual spaces in the downtown with Tactical Urbanism

INTRODUCTION

process

JANUARY
• Walking tour with Urban Planner Scott Hanson
• Photographic and video studies of streetscapes
• Initial idea exploration, conceptual intervention visualizations, and team-forming

FEBRUARY
• Site analysis and assessment
• Precedent studies and conceptual development
• Presentation to Springfield stakeholders

MARCH
• Ongoing feedback and critical refinement
• Midterm department presentation: UMass LARP

APRIL
• Publicity and outreach
• On-site visits and material preparations
• Critique by guest professor
• Interventions in downtown Springfield
• Walking tour and gallery gathering

MAY
• Final department presentation: UMass LARP
• Video presentation and discussion with city officials
Tactical urbanism describes urban design projects which seek to improve local neighborhoods and public spaces through small-scale, low cost, and temporary interventions. These initiatives may be condoned or sponsored by city government. Alternatively, tactical urbanism may be completely accomplished through grassroots efforts.

Tactical interventions can work to affect long-term urban visions because they are responsive to the local context and serve to test ideas with the community before investing in permanent or large scale projects. Tactical urbanism has become a rising 21st century trend in major cities around the world.
Located on the eastern side of the Connecticut River in the southwest portion of Massachusetts, Springfield’s Metro Center is the urban core of the western half of the state. Its industrial legacy made it a notable center of growth at the turn of the twentieth century. However, after World War II the city’s downtown declined rapidly. Recent interest in revitalizing this area has brought attention back to the Metro Center.
PROJECT AREA

The Metro Center neighborhood is bound by distinct edges and landmarks on four sides. The armory, set upon a distinct hill, lies along the northeast border reinforcing this edge with a sharp upward slope. The southeast edge is bound by the high traffic lanes of State Street. The facing boundary is established by raised railway tracks which run alongside the historic Union Station transit hub. The northern corner of the project area, known as the Worthington Street Warehouse District, is a derelict block of industrial and vacant buildings. In the opposite corner, the MGM casino project is being planned. To the southwest, a double edge is created by the parallel lines of the elevated Interstate 91 and the 1,200’ wide Connecticut River.

Overall, the Metro Center includes approximately 690 acres of land. This neighborhood has experienced major changes over recent decades and centuries. Cycles of urban growth and decay have affected the form and function of this area. The following analysis examines a variety of factors that have contributed to the constantly evolving condition and character of the Metro Center.
While documenting the streets of the Metro Center and examining its urban form, the students found that neglected and residual spaces are a common occurrence throughout the downtown. These spaces reveal a fractured quality to the spatial experience and a high degree of variation in street character.

“As a greater urban phenomenon, the large auto-oriented size of modern cities, rapid development practices, deindustrialization, and increasingly centralized political structure encourage the creation and maintenance of neglected space.” -Erick Villagomez
This typology illuminates the numerous spaces left over from post-war urban decay and renewal, which saw the demolition of several older structures and the creation of out-of-scale architectural or auto-oriented projects with little regard to landscape continuity.

The studio teams recognized these residual spaces as opportunities for revitalizing the neighborhood through creative projects that adapt to the current urban form. Many of the ideas expressed in the tactical interventions and long-term urban designs developed from the consideration of these spaces in concurrence with site analyses.
HISTORY

Springfield is located in what was historically Pocumtuc and Nipmuck territory.

Timeline:

1636: William Pynchon founded Springfield on land purchased from the local Pocumtuc Indians, the area along the Connecticut River including a village known as Agawam (at the present-day Metro Center).

1600s: Springfield became an early trading and agricultural center for European colonists. By the late 1600s Springfield had developed into an early manufacturing leader, generating glass, iron, and wood products.

1700s: Springfield struggled due to the collapse of the fur trade and continued violence between European colonists and indigenous people.

1777: After the onset of the Revolutionary War the Armory was founded as the primary center for the manufacture of U.S. Military firearms. It continued operations till 1968.

DOWNTOWN SPRINGFIELD IN THE 1600s
Several smaller streams run from the upper to the lower terrace and the marshlands of the Connecticut River. “Town Street” runs parallel to the River while “Stone Pit Road” connects perpendicularly and will later be named “State Street”.

DOWNTOWN SPRINGFIELD IN 1827
While some of the small streams still exist, the existence of marshland is not indicated anymore. Over time a basic system of streets has been established.

HISTORY

In the nineteenth century Springfield became an industrial and manufacturing center for the rapidly developing U.S. economy. Innovators invented new products while a precise manufacturing labor force mass-produced goods.

1805: Merriam Webster dictionary was first published.

1844: Vulcanized rubber was discovered and patented.

1856: The Smith and Wesson arms partnership began manufacturing weapons.

1861: Everett Barney patented and manufactured the ice skate.

1891: Dr. James Naismith created basketball.

1895: The Duryea Motor Wagon Company is established as the first American firm to mass-produce gasoline-powered automobiles.

In the early twentieth century Springfield maintained its success as a manufacturing and commercial center. However, the Great Depression of the 1930s had a widespread negative effect on the city’s economy. Many jobs were lost due to company closures and the skilled labor force was greatly reduced. World War II aided the economy as the military required an increase in the manufacture of goods and weapons. The economic recovery did not last long as the city entered into a post-war recession. This period included the loss of manufacturing operations, including the closure of the Armory in 1968. Lack of employment and increased urban tensions resulted in the loss of population in the Metro Center as inhabitants moved to suburban areas.
RECENT INITIATIVES

Springfield entered into a stable phase as the twenty-first century began. Its population and economy stopped declining. Recent trends have shown efforts to revitalize the Metro Center.

The UMass Center in Springfield, opened in 2014, was created as a collaboration with Holyoke Community College and Springfield Technical Community College. Its goal is to provide greater access to education and training opportunities within the downtown area. Located within 26,000 square feet of the Tower Square, the center contains classrooms and a lounge overlooking the park at the former Steiger’s Department Store. Courses taught within these spaces contribute to programs in nursing, business administration, education, and counseling, among others.

A report by Zimmerman/Volk Associates (2013) demonstrated the potential market for new construction and reuse of existing housing units within downtown Springfield. This study projected a market potential for 106 to 171 new units of market rate housing per year for the next five years.

The MGM Springfield casino project is steadily moving forward in 2015. This development plans to create a residential, retail, dining, and entertainment district that preserves some of the downtown’s historic architecture. This project has been a contentious issue within Massachusetts. Some proponents argue that it will bring economic growth while critics anticipate negative social and economic impacts for Springfield’s low-income earners and small business operations.

Union Station is set to reopen as a multi-modal transit hub in 2016. The renovation of this historic train station will provide new retail and office spaces as well as a connection between Amtrak, commuter rail, and regional and intercity buses. The new complex will have 377 parking spaces, 26 bus berths, and a reactivated transit-link tunnel. This project, spearheaded by the Springfield Redevelopment Authority, promises to catalyze downtown revitalization by stimulating transit-oriented development improving access to the Metro Center’s cultural and entertainment centers.
Between 2002 and 2009 the population of the Metro Center grew by 11.8% to 6,752 people. A high number of the residents live in poverty. The majority of the population has a high school level education. The latino population has increased in recent years and is the largest ethnic group in the neighborhood.

Source: Utile design, 2014
CIRCULATION

STREET GRID
Highways frame the Metro Center. Interstate-91 passes along the western edge of the community, blocking the riverfront, while I-291 creates a division through the neighboring Northgate area. A finer texture surrounds the immediate downtown, but connections to these areas aside from the use of single automobiles are few.

The downtown street grid was simplified over the course of the twentieth century due to urban renewal practices in which streets were removed and blocks were extended in irregular shapes and sizes. This process, which proceeded in sync with increasing automobile traffic, diminished the pedestrian experience of the streets of the Metro Center. Several streets are unpleasantly large in scale and have few amenities that promote pedestrian or bicycle use. There are a few large blocks found on the northeastern side of the downtown core which are characterized by a dilapidated quality and low levels of activity.
CIRCULATION

STREET NETWORK AND HIERARCHY

Chestnut Street and Dwight Street are the two main arteries facilitating automobile access between the north and south ends of the Metro Center neighborhood. They allow one-way travel and higher driving speeds. These wide, fast-paced streets cut through the urban fabric, creating a disjointed, uninviting feeling. These high-speed auto routes inhibit pedestrian and bicycle circulation.

Other one-way streets are smaller in scale and abundant throughout the street grid. These routes create confusion for drivers and are often less direct than their two-way counterparts.

Main Street and State Street are two major two-way streets that carry a considerable amount of auto, bike, bus, and pedestrian traffic.

Interstate-91 passes through the Metro Center as an elevated, multi-lane highway. This corridor creates an abrupt and unpleasant boundary between the neighborhood and the Connecticut River to the west. Non-auto access to the riverfront is limited and characterized by unappealing factors including at-grade crosswalks across multi-lane roads (East and West Columbus Streets), excessive traffic noise, few trees, unattractive parking structures, at-grade train track crossings, dimly lit underpasses, and cage-like elevated walks.
CIRCULATION

WALK AND BIKE ACCESS

It takes on average about twenty minutes to walk at a leisurely pace from the north corner to the south corner and from the east corner to the west corner. With a little under 100 restaurants, bars, and coffee shops in the Metro Center, there is some incentive for pedestrians to travel by foot in this neighborhood.

The Metro Center has many fundamental characteristics that promote non-auto circulation. These include access to public transit, short walking distances between destinations, small blocks, and local attractions. However, there are characteristics which dissuade many people from walking or biking through the Metro Center. Inactive and unstructured edges, continuous street walls, excessive parking lots, and a lack of trees contribute to a desolate quality that hinders pedestrian activity.

The overabundance and easy access to parking lots provides evidence of the city’s heavy dependance on automobile circulation.

<table>
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<tr>
<th>Distance</th>
<th>Walk-shed (minutes)</th>
<th>Bike-shed (minutes)</th>
</tr>
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<tr>
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<td>15</td>
<td>12</td>
</tr>
<tr>
<td>1 mile</td>
<td>20</td>
<td>18</td>
</tr>
</tbody>
</table>

Walk-shed

1/4 mile (5 minutes)
1/2 mile (10 minutes)
3/4 mile (15 minutes)
1 mile (20 minutes)

Bike-shed

1/2 mile (3 minutes)
1 mile (6 minutes)
2 mile (12 minutes)
3 mile (18 minutes)
**STREET TYPOLOGIES**

**SUCCESSFUL RESIDENTIAL: MATTOON STREET**

Aspects of a comfortable residential area, as seen along Mattoon St., include:
- narrow street width
- on street parking
- wide, accessible sidewalks
- moderately sized street lamps
- mature street trees
- appropriately sized housing on each side of the street

**LESS COMFORTABLE RESIDENTIAL: SPRING STREET**

A lack of vibrancy along Spring St. is due to:
- dominant institutional building directly across the street from residential buildings
- oversized street lamps
- few mature street trees
- relatively large housing structures
- a lack of parking

Photos taken from Google street view (2015)
STREET TYPOLOGIES

SUCCESSFUL COMMERCIAL: WORTHINGTON STREET
The desirable qualities of one of the commercial areas along Worthington St. include:
- a high number and a variety of businesses
- wide, accessible sidewalks
- street lamps that adequately light the way without being too large and imposing
- close proximity to public green spaces

COMMERCIAL IN NEED OF INTERVENTION: DWIGHT STREET
Some aspects of the area along Dwight St. detract from commercial activity. These include:
- wide streets divided by fast-paced one-way traffic
- large blocks of buildings without storefronts
- inhospitable sidewalks with few trees
- oversized street lamps

Photos taken from Google street view (2015)
Street Typologies

The Heart of Downtown: Main Street

The downtown of the Metro Center is distinctly recognized along Main Street, the main corridor through this part of the city. This area is characterized by a variety of businesses densely assembled across several blocks. The buildings are relatively larger than most parts of the city; they are typically at least three stories along Main St. There is a mix of historic and newer buildings. It is a high traffic area for pedestrians, bikes, buses, and private automobiles. There are four lanes total for vehicular traffic: two lanes for each direction. This wide, high traffic corridor creates a busy division between the activities on either side of the street. However, wide sidewalks do help make the area accessible and convenient for pedestrians. The street trees along Main St. are young, not well-tended or nourished, few in number, and widely spaced.

Photo taken from Google street view (2015)
URBAN FABRIC

The Metro Center is the dense central core of Springfield. As seen in this figure ground image, the Metro Center (located within the red box) is characterized by relatively wider buildings than the surrounding neighborhoods. Arterial routes extend away from the core, visible here as continuous, linear white space. Interstate 91 curves along the southwest edge of the city, cutting through the grid patterns. Near to the interstate the Connecticut River is unclear due to the fragmented edge of the built environment. Other downtown edges are fragmented as well. The surrounding suburban residential fabric is more intact.
The urban fabric of the Metro Center went through extensive changes during the twentieth century. Many blocks throughout the neighborhood experienced complete redevelopment. As seen in the 1920 figure ground below (in red in the facing overlay image) the historic architecture was smaller in scale and arranged in dense grid patterns framing the streets as well-defined corridors. Through urban renewal in the post World War II era, this pattern was lost as buildings were razed and replaced with oversized structures arranged in spatially fragmented patterns. The north and west side of the downtown area was demolished in the past mid-century. This resulted in a loss of housing in the downtown area and the dissolution of the urban residential community. At this time there was a trend towards super-blocks, zoned to favor single uses of business and institutional functions. Tracks and highways in the present figure ground are evident in the wide white areas that surround large scale buildings. Street networks are immediately apparent in the historic image. In the present condition, the north to south corridors of Main, Dwight, and Chestnut Streets are evident, whereas the east-west fabric is undone. Mattoon Street has been preserved to maintain its historic character. This street is well framed and missing the fewest “teeth”. Voids in the 1920 image are civic open spaces and parks, whereas the present voids are mostly parking lots and untended vacancies.
LAND USE

The land use of the Metro Center illustrates loosely defined and fragmented districts. Many of the uses are not active. For instance, many buildings seen as mixed-use have vacant components. Although some buildings may have a first floor business operation and the capacity to have offices or apartments in higher levels, the upper-level uses are not present.

Vacancy and fragmentation are prevalent issues for this area. The vacant quality is most notable in the northern corner of the Metro Center where old industrial and commercial buildings have been abandoned. These buildings are surrounded by a mix of unappealing spaces; most commonly these are parking lots and overgrown vacant lots. Civic use dominates the souther side of the Metro Center. These buildings are generally larger and connected to the busy corridor of State Street. Residences are mostly restricted to the Mattoon Street area. There are few residential areas in the downtown core.

Parking is evident throughout the area as both light gray signifying outdoor lots and dark gray for parking structures. Open green space is mostly found on the periphery of the downtown core and is not well connected.
PUBLIC SPACE

There are some parks in the Metro Center; however, these spaces are characterized by varying degrees of public access. Some public parks, such as the Quadrangle, are not accessible outside of certain hours of operation. There are some prominent and underutilized parks in downtown Springfield that could be more connected to form a cohesive, legible open space network. This potential connection offers opportunities to designers envisioning a reinvigorated Springfield.
NATURAL SYSTEMS

URBAN HYDROLOGY

Springfield is mostly flat with a slight slope towards the Connecticut River. However, the historic flood plain bisects the Metro Center creating an upper and lower terrace.

The sewer system of Springfield combines both street runoff and household sewage during high volume rain events. One ecological challenge faced by the community of Springfield is the discharge of contaminated water into the Connecticut River during peak stormwater flows. This process, known as combined sewer overflows (CSOs), has detrimental effects on the quality of riparian habitat along the river. National Heritage & Endangered Species (NHESP) habitat is located along the riparian corridor. Due to the ill effects of this contamination pattern, the city is under pressure from an EPA order to reduce the 23 active CSOs.
Springfield sits east of the elevated Interstate 91, railway tracks, and a flood wall, separating it from the Connecticut River. The interstate highway is six lanes wide and has multiple on and off ramps connecting to the downtown. This feature dominates the surrounding landscape due to its enormity and excessive vehicular noise. The train tracks, crossing at grade with the pedestrian and bike route to the waterfront, poses less of an obstacle to the senses. However, the tracks have few safety measures around them, making it a higher risk area. These impediments form an unpleasant edge to the Metro Center, making the journey from the downtown core to the riverfront unappealing. Due to the separation of the downtown from the river, the Connecticut River Walk & Bikeway and the Riverfront Park are underutilized assets of the Metro Center. In addition to the separation the interstate overpass causes, this elevated route creates a vast amount of underutilized space under the road surface.
NATURAL SYSTEMS

UNDERUTILIZED IMPERVIOUS SURFACES

Downtown Springfield is densely covered in underused impervious surfaces. These surfaces included ubiquitous parking lots which lay under vast voids, the spaces left behind by historic buildings demolished decades ago. Although parking lots are numerous, fifty percent of Springfield residents do not own cars. Usage of off-street parking areas is extremely low (less than fifty percent on average), while on-street parking spaces are perceived to be scarce.

In addition to parking, the numerous rooftops of Springfield contribute to its high levels of impervious surface. There is a total of 21,795 square feet of flat roof within the project area. These numerous surfaces prevent water from seeping naturally into the soil. This trend increases the volume of stormwater runoff and the prevalence of sediment and contaminants passing over the landscape into bodies of water. A lack of continuous tree canopy, shrubs, and ground cover vegetation also impairs the hydrology of the Metro Center.

These vast, underutilized spaces could be used for potential design interventions that mediate water problems.
CONCLUSIONS

The analysis of the Metro Center allowed the student teams to conceptualize multiple issues that are relevant to urban design in this context. While assessing the findings the group felt that there are many sites throughout the neighborhood that are prime for tactical interventions. The eight types of residual spaces examined were found to be prevalent throughout most of the Metro Center. Additionally, these underused spaces coincided with additional urban problems, such as:

- food scarcity,
- few amenities for pedestrians,
- a lack of bicycle-safe routes,
- hydrologic impairments,
- high vacancy rates,
- poor wayfinding mechanisms,
- few quality green spaces,
- limited aesthetic experiences in the public sphere, and
- an overall lack of landscape cohesion.

Also, it is readily evident that in its decades of decline the infrastructure and general urban form of Springfield fell into disrepair. Although these compounded issues pose large problems for any designer working in Springfield, these challenges opened new opportunities when considered in the context of contemporary urban revitalization trends. By matching long-term visions for the Metro Center with short-term, site-specific tactical interventions the teams were able to deliver a variety of ideas in multiple formats. Furthermore, the experience of interacting with community members during the installation of projects added a great deal of meaning to the research and design process.
INTERVENTIONS BY TEAM

The studio teams installed tactical interventions throughout the Metro Center on Friday, April 24, 2015. These interventions expressed intentions of their long-term visions, brought attention to particular urban issues and places, and engaged the public by testing out concepts with passers-by and participants. A tour was held in the afternoon to coordinate groups of interested and involved community members to each of the various projects. Outreach and publicity, including work with local partners and media, was done in the weeks leading up to this event. These connections helped to establish knowledge of this studio work and open lines of communication between a variety of stakeholders. Although some relationships were established prior to the interventions, many interactions occurred spontaneously during the installation and experience of the installations.

The stops along this tour (listed below) correlate with the overall work of each design team. The following pages elaborate on their interventions, concepts, and longterm visions for the Metro Center.

1. UNION STATION GREEN CORRIDOR
   Maozhu Mao • Yuqing Wu
   pages 60-67

2. (NO) VACANCY
   Chris Counihan • Michalagh Stoddard • Ruoying Tang
   pages 68-75

3. EXTRA SPACE, ACTIVE STREET
   Yu Yu
   pages 76-83

4. SPRING INTO ART
   Emilie Jordao • Matt Hisle • Jing Wang
   pages 84-91

5. URBAN AGUA
   Kellie Fenton • James Prendergast • Nelle Ward
   pages 92-99

6. MAKE THE CONNECTION
   Yue Li • Yanhua Lu • Yi Yang
   pages 100-107

A- Tour began at a gathering in Center Square (aka Steiger’s Park)

B- Stop hosted by the Back Street Bistro

Market Place extension of Spring Into Art • refreshments and information

C- Reception hosted by Focus Springfield Community TV

1200 Main Street • refreshments and celebration
This project aims at revitalizing the Union Station District of Springfield. By creating a green corridor connecting the Union Station and UMass Center, this proposal makes use of some underutilized open spaces. This vision provides people with better walking routes through the city and guides them to downtown, thus achieving the aim of revitalization. The plaza adjacent to the Union Station and Steiger’s Park were chosen as the two gateways of this green corridor.

Movie link tactical intervention: https://www.youtube.com/watch?v=EnEBY18x0Es&feature=youtu.be
As one of the most racially diverse parts of western Massachusetts, the Metro Center represents an opportunity to build community by intertwining a varied population. By creating this green open space system, both visitors and residents of the neighborhood are encouraged to gather in common spaces and talk with each other. This proposal includes an increase of green, mixed use, office, and retail spaces.
A Spring Afternoon at Steiger’s Park

Programmatic elements of Steiger’s Park change with the seasonal cycle. Ice skating takes place in winter, while in summer visitors enjoy relaxing under shade trees near fountains.
UNION STATION GREEN CORRIDOR

Union Station Plaza: A New Gathering Space for a Renovated Transit Hub

Lighting structure at night

Farmers’ market in summer

Landscape Architecture & Regional Planning
This project addresses the vacant and underutilized spaces in the two “Warehouse Districts”: the Worthington/Lyman Street neighborhood and under the I-91 overpass. A multi-phase revitalization plan begins with a tactical intervention and culminates in the reweaving of the urban fabric. This will activate the vacant and underutilized spaces: initially by driving a custom “(No) Vacancy” sign around; second by proposing facades, a farmers market, and a mobile orchard; and lastly by completing an urban infill plan. The infill plan develops under the highway, turns the Worthington district into a mixed use residential/retail neighborhood, and connects the two areas with a green street and the riverfront with an at grade train track crossing.
### Apple Production

- Current Production: 0 lbs
- Proposed Production: 9,000 lbs
- Proposed Production: 53,000 lbs

### Housing Units

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<th>Vacant</th>
<th>Re-use</th>
<th>New</th>
<th>Total</th>
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<tbody>
<tr>
<td>470</td>
<td>136</td>
<td>0</td>
<td>2,300</td>
<td>2,906</td>
</tr>
</tbody>
</table>

### Trees

- Existing Trees: 5
- Proposed Trees: 200

### Underpass Visitors

- Current: 1,840,000
- New: 645,000
- New: 345,000

### Building SqFt

<table>
<thead>
<tr>
<th>Existing Housing</th>
<th>Vacant Housing</th>
<th>Re-use Housing</th>
<th>Newly Built Housing</th>
<th>Total Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>850,000</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Retail Lofts

- Existing: 3
- Proposed: 3
- Proposed: 6
- Proposed: 6
- Proposed: 6
- Retail Orchard/Open Space: 1

### Master Plan

- Graduate Urban Design Studio • LA 604/606 • Spring 2015

- Chris Counihan • Michalagh Stoddard • Ruoying Tang

### Neighborhood Residents

- **Sophia**
  - 68 year old transplant from Detroit recently retired from teaching in the UMASS Center nursing program
  - Spends most of her time in the neighborhood and has found it to be a good place to retire
- **Raphael + Sarah**
  - Married with 2 children
  - Own 442A Worthington St, where they run a bakery on the ground level
  - Get supplies from a warehouse on Lyman St and produce from the weekly farmer’s market
- **Kaylee + Kelly**
  - Designer/owners of a children’s clothing line that operates out of a rented retail space on Taylor St.
  - Live in a loft in the newly renovated Willys building
  - Relax in the nearby orchard
PHASE 1: 10 YEAR PLAN
Temporary orchard (Worthington St.)
Farmers market (overpass)
Arts market (overpass)
Facade gallery complete
Improved Taylor St.

PHASE 2: 20 YEAR PLAN
Temporary orchard lots filled
Vacant buildings reused
Established artist community
Whole space under highway developed: skate park, bike rental, art gallery
New street grid

PHASE 3: 50 YEAR PLAN
Community transitions to complete mixed use neighborhood
Building reuse/revitalization near highway
Parks incorporate fruit production
Adjacent neighborhoods develop

Street Typology

Under the I-91 Overpass
The tactical intervention was a mobile art installation intended to spark discussion on what to do with Springfield’s vacant spaces and structures. A mobile "(No) Vacancy" sign was driven around Springfield’s Metro Center to various vacant sites. The installation highlighted underutilized spaces in the Upper Lyman Street Warehouse District, specifically: 481 Worthington St., 165 Lyman St., and the area under the I-91 overpass. Fliers explaining the long term vision for Springfield were handed out to local people at each location. Discussions occurred among residents and visitors alike about what should be done with the vacant spaces found throughout Springfield.

Although the initial intervention may not have been practical for the citizenry, the effort sparked discussion about the significant underutilized space found in Springfield. It served as a pilot for a greater project for the Warehouse District, so feedback was considered and an ongoing discussion will continue through the formation of the new art community and the new neighborhood.

The team hopes this installation will plant the seed for a vital artistic community that will emerge in the Warehouse District. Community building is an important aspect of this project. Art installations will involve and engage the community, while the orchard will encourage community stewardship as well as provide a healthy, local choice for food. The creative community that arises from such a project will help enliven and foster a more vibrant residential community in the neighborhood, encouraging entrepreneurship and vital services.
This intervention activated the underutilized space at Apremont Triangle. Instead of using the area solely for traffic mediation, the space was used for gathering. Turf, seating, plants, and a table were used to invite people to stop and rest. Chairs and benches were built out of recycled materials by the Junior students of the Landscape Architecture program and placed to provide diverse opportunities to sit. Providing this pop-up park allowed visitors to imagine the possibilities of this space.

**EXTRA SPACE, ACTIVE STREET**

Yu Yu

Movie link tactical intervention: https://youtu.be/2pgYq3HLN4A

Credits: Mark Gullifer and Blad Hernandez (PVC Pipe Chair)
Cameron Roach, Alex Hentnik, Taylor Shulda (Red Tubed Chair)
Mike Abate, Andrew Woodward, Nick MCMenamin (Movie Chair)
Tactical Intervention:
Extra road space in front of the Apremont Triangle was used to build a small "park". This reclaimed space attracted people to come and take a seat. This park started to make people think about this area and potential uses of extra space around them.

Short term:
During the Mattoon festival or other local events, one side of the road would be blocked to provide people with a resting and gathering area. Tables and chairs would be placed outside the adjacent restaurant for outside dining. Following the end of the festivities, the road would be changed back to its former state.

Long Term Vision:
A vibrant, pedestrian-friendly park is achieved by converting the road at one side of the triangle to walkway. Automobile traffic continues as a 2-way on the far side while vegetation and landmass enclose a central seating area.
1. Granite seating edge
2. Pedestrian-only side walk
3. Landmass
4. Raised space
5. Ramp
6. Main Space
Nick Kelvin often goes to the restaurant beside the plaza and has been enjoying the new plantings and seating.

The Smith Family enjoys the new park because it provides something for each generation: a place to play, eat, relax, and chat.

Kacey Darcey lives in a Kimball Towers condominium. Since the new park has been established she has noticed the area feels more secure.

Henry Opal often travels by train. When he gets out from the station, he goes to the park to enjoy a cup of coffee.

The Smith Family enjoys the new park because it provides something for each generation: a place to play, eat, relax, and chat.

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82
83
The goal of this project is to create a vibrant Cultural District at the core of downtown Springfield. The team proposed short-term (tactical urbanism), midterm (programming), and long-term (urban design) solutions to achieve this goal. The short-term interventions were installed in 5 hours; the total cost was $130. The installations were displayed for 4 days.


**Market Place**

Market Street was enlivened with consecutive curtains of red ribbon to form a corridor. The idea was to attract pedestrian’s and drivers’ attention and make them want to explore the alley.

**Pynchon Plaza**

Origami decorated an existing sculpture in Pynchon Plaza. Ribbons guided the eyes to cushions providing a comfortable surface for people visiting the plaza.
Community Engagement

In order to make this project meaningful for the residents of Springfield, the team partnered with the 21st BSEP After-School Program of the Putnam Vocational Technical Academy in Springfield. This included students from 9th to 11th grades, as well as their instructors. The team created discussion groups, where the students shared their thoughts and opinions about the city. The team also provided origami workshops where students were encouraged to write a message to other residents. The students also assisted with the installation and participated in the studio tour. The partnership was very successful and hopefully will continue through other projects.

The Cultural District

The Cultural district covers architecturally-relevant areas, museums, symphony hall, art galleries and restaurants (among other attractions) in approximately 1/3 of a square mile. The Springfield Business Improvement District is working to implement a “Cultural Walk” that will touch on the main points of the Cultural District. This project considers the Cultural District and Walk as important tools to work with in order to revitalize downtown Springfield.

The area is surrounded by wide streets, including Main and State streets which impose a challenge in walkability due to their busy auto traffic patterns. However, there is a system of connected pedestrian paths in place, as well as pedestrian-only streets and open spaces, which can be utilized to reinforce our goal of making this center more lively.
Programming

This project addresses 3 different types of small scale, underutilized spaces:
1. In between spaces;
2. Redundant infrastructure;
3. Established underused spaces.

The core of Springfield’s downtown was chosen due to its location within the Cultural District, its existing visibility (concentration of residents, workers, and visitors), the concentration of three studied typologies, and its connection to public spaces. These factors increase the likelihood of enlivening such spaces and provide a new perspective on the possibilities for underused spaces throughout the city. The three initial sites are: 1) Market Street, 2) the parking lot near Market Street on Falcons Way, and 3) Pynchon Plaza. These sites form a corridor on Falcons Way that offers an alternative route for the cultural walk and a potential of link to the River.

After bringing initial attention to these three areas, the project intends to keep them alive through programming. A proposed the “Art and Entertainment Festival” would occur twice a month during the summer. On these days, there would be an art fair on Market Street, music in Pynchon plaza, and a film screening at the parking lot next to Market Street. All events would be free to the public.

Street-scape Improvements

The new proposed streetscape is designed to provide Springfield’s Cultural District with a pedestrian-friendly system. Street trees in infiltration rows improve the hydrologic infrastructure and calm traffic. Additionally, bike lanes and on-street metered parking enhance the vitality of the area.
Market Street has high appeal and offers a pedestrian-scale environment off the beaten path. The parking garage beside Market Street is removed and replaced with two mixed-use buildings, one of which includes parking. This will create a symbiotic relationship between the various building uses and Market Street. A series of changing sculptures and pieces of art are part of a community-oriented program which enhances the sense of place and community ownership. These features create a viable node within the city’s Cultural District and perhaps garner a spot along the cultural walk.

The new design of Pynchon Plaza provides a public gathering space and an ADA accessible path that serves as a gateway to the adjacent museum. A new museum building would serve as a souvenir shop. The proposed ramp is joined with stairs that provide additional seating. One of the landings would lead visitors to a roof garden. The entrance space would have well defined edges including a natural boundary of trees and shrubs and a hard surface facade at the adjoining building. Additionally, the new Pynchon Plaza would serve as an amphitheater for concerts hosted by the museum or city.

The master plan illustrates the Cultural District, the area in color, and highlights the Cultural Walk in blue line. This plan addresses the streets and underutilized existing spaces in the Cultural District. The biggest development is the continuation of a long corridor between the mixed-use developments next to Market Street. This corridor leads directly through a parking lot and extends towards another underutilized park, Stearns Square. By continuing this corridor we develop a series of new developments in spaces that were previously reserved for parking. This enhances pedestrian access within the Metro Center while increasing building density and promoting residential development.

Several features develop a sense of arrival and experience. Significant raised pedestrian crosswalks on all intersections signify the edge of the Cultural District. These intersections act as a gateway to the district and are highlighted by overhead elements and in-ground expressions. Once within the Cultural District the streetscapes showcase a distinct character through planted median strips. These features create a pedestrian-friendly environment that enhances the Metro Center’s Cultural Walk.
Movie link: https://www.youtube.com/watch?v=vk2PUJdTU&feature=youtu.be

The goal of this project is to revitalize the Metro Center through green infrastructure and smart growth practices. This long-term vision requires that the city enhance ecoliteracy opportunities through public spaces and programs that emphasize the re-use and infiltration of storm water at its source.

This vision responds to Springfield’s current need to reduce impermeable surface area and demonstrate best practices under an EPA consent order to reduce CSOs. The solutions highlighted here would improve public health and ecological integrity while enhancing the human experience of the neighborhood.

Lyman Street (1), which will host the redevelopment of the Union Station transit hub, would provide a connection between the riverfront and the proposed rail trail.

State Street (2), running adjacent to the new casino and numerous sites of cultural importance, would serve as another primary artery for bike and pedestrian circulation encouraged by green street practices.

Other green street or open space routes, such as a Mill River trail (3), would be included in the network of connections.

URBAN AGUA
Kellie Fenton • James Prendergast • Nelle Ward

Celebrating Water as a Community Resource

Connection to Surrounding Open Spaces
Green Infrastructure Toolkit

URBAN AGUA

Regenerated Wetlands

Green Streets & Bio-Swales

Rain Barrels

Green Parking

Green Roofs & Green Walls

- Existing roofs and walls would be consoli-dated where pos-sible to use space more efficiently.
- Retrofitted parking lots would meet MA Smart Growth stan-dards.
- Bioretention cells would be used to hold the 1st inch of rainfall.

- New buildings would include green roof/wall provisions

- A city-wide stormwater utility fee would provide funds to renovate the streetscapes.
- Renovations include the addition of street trees, bio-retention swales and cells, bike lanes, and raised street crossings.

- Installation of barrels onto gutter systems would be standard in new residential developments.
- Barrels painted by local artists would be auc-tioned off to con-trIBUTE to Green Street funds.

- Existing lots would be consoli-dated where pos-sible to use space more efficiently.
- Retrofitted park-ing lots would meet MA Smart Growth stan-dards.
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- Bioretention cells would be used to hold the 1st inch of rainfall.

20 Year Vision Diagrams

A combination of factors will improve the livability, urban form, and ecological impact of the Metro Center. Scale-appropriate residential and mixed-use infill restores the urban grid and street vitality while providing more definition to the residential and business districts. The decrease in impervious surfaces and introduction of numerous street trees combine to vastly improve the hydrology of the neighborhood, reducing the chance of CSOs while beautifying the city.

Figure Ground

Land Use

Trees

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Kellie Fenton • James Prendergast • Nelle Ward
A residual, impervious parking lot is transformed into an ecologically and socially activated space. The lot's stormwater runs into a central dry creek planted with native, hydrophilic vegetation. Grass medians allow visibility and provide pedestrian passage through the dry creek. A plaque describes green infrastructure at the site and can be used as an educational marker for the City Public Library. A runnel and bump-out collect runoff from the street and discharge it into a stepped planting bed. The terraced rain garden draws the attention of pedestrians and people waiting for the bus. The bump-out also serves as an expanded waiting area for bus riders.

This design renovates the exterior of the Mass Mutual Center to utilize the high amount of rainwater that can be collected from the roof of this large entertainment venue. Water collected from the roof is directed to a vertical planting system. This green wall of native vines supports local wildlife by providing fruit and nesting sites for birds. Additionally, stormwater circulates to a cascade, providing visual and auditory interest. Runnels and stone benches collect water to be used in the building’s gray water system.
URBAN AGUA

The Connecticut River Waterfront

A revitalized waterfront restores the community’s connection to the river while providing wetlands to improve hydrology and habitat. In this diagrammatic section blue water drops demonstrate areas of increased interception, bioretention, evapotranspiration, and infiltration as a result of green infrastructure.

A wide boardwalk passes over the constructed wetlands, alive with blueberry and holly shrubs, connecting the end of State Street to a waterfront promenade adorned with red maple, tupelo, river birch, and other native wetland trees.

Tactical Intervention

Blue, temporary paint was used to draw attention to water along State Street by the Mass Mutual Center. The blue water drops follow the path of a historic stream and highlight catch basins as part of the current gray infrastructure. Live plants and recycled pallets were used to illustrate a green roof/wall concept. Water balloons, simulating rain drops, were popped by participants over the display demonstrating the ability of green infrastructure to slow down and absorb storm water.
MAKE THE CONNECTION

Yanhua Lu • Yue Li • Yi Yang

Tactical Intervention: Moving Wayfinding

With a funny costume and comical gestures, the team attracted people’s attention along State Street and near the Court House. By handing out flyers with an illustrated route to the riverfront, they communicated to passers-by the time it takes to walk from the downtown to the river. This mobile intervention highlighted that the Connecticut River is a wonderful asset to the Metro Center community within a walkable distance.

Movie link tactical intervention: https://youtu.be/EvQDOQYV97Y

Long-term Vision: Connect Downtown Springfield to the Riverfront

Pedestrian & Bike Circulation  Public Social Space  Green Space  Land Use
MAKE THE CONNECTION

Tracy
Tracy is a first-year nursing student at the UMass Center. After class, she likes to sketch the historic buildings along State Street and the beautiful scenery on the riverfront.

Sandy & Alice
Sandy and Alice are a couple that moved from Philadelphia to Springfield four years ago. Sandy works at the Courthouse while Alice works at the Springfield Central Library. They often ride bikes along the riverfront and run on State Street.

Eric
Eric works at the Mass Mutual Center. He always enjoys lunch in the food court near the basketball hall. Often he will take walks along the riverfront to relieve stress after work.

Michelle, William, & Anna
Michelle and William had their first child Anna one year ago. They live in a small apartment near the corner of Dwight and State Street. They often take walks to Merrick Park to enjoy family time. Sometimes they walk to Court Square when the weather is good.

Part 1: Reusing underutilized space under I-91
This site was activated to provide relaxation and fun by creating an “underwater” skateboard park with entertainment facilities. Some pop-up events can also happen here, including temporary performances, farmer’s markets, and coffee trucks.
MAKE THE CONNECTION

Part 2:
A Gateway from the Court House to State Street

Following conversations with local people during the tactical intervention, the team knew that people who work around the Court House do not have enough space to relax. This gateway park is designed to lead people to the river-front where they can appreciate the river and recreational spaces. This space improves the connection between Court Square and State Street while also serving as a restful lunch spot.
MAKE THE CONNECTION

Part 3: State Street from the Armory to the Riverfront

Vertical green walls are added to simple concrete buildings, such as the Mass Mutual Center and the Court House.

Secondly, greenery and recreational space was added at sites with residual space overhead, such as the Mass Mutual Center and the Court House. A bicycle lane was also added, taking advantage of State Street’s excessive width.

MOBILE COFFEE STAND

Green Wall

Parklet

Bicycle Parking

Planters and Benches

On-street Parking

Casino

Street Trees

Bike Lane

Proposed Mixed Use Building

Mobile Coffee Stand

Green Wall

Parklet

Bicycle Parking

Planters and Benches

On-street Parking

Casino

Street Trees

Bike Lane

Proposed Mixed Use Building
PUBLICITY

Public Media Coverage:

New England Public Radio:

WGBY 57 TV:
“Downtown Springfield’s ‘No Space Left Behind’ Tour, Connecting Point”, Apr. 22, 2015 https://www.youtube.com/watch?v=ZGz0eBPw3Sw

Local and University Media:

“UMass Amherst landscape architecture students create temporary” http://photos.masslive.com/republican/2015/04/ummass_amherst_landscape_architecture_students_create_temporary_2.html

OUTREACH

Design Team Videos:

1. Union Station Green Corridor - Maozhu Mao • Yuqing Wu
   https://www.youtube.com/watch?v=EnE8Yt8x0Es&feature=youtu.be

2. (No) Vacancy - Chris Counihan • Michalagh Stoddard • Ruoying Tang
   https://youtu.be/CapaQ9gDxeM

3. Extra Space, Active Street - Yu Yu
   https://youtu.be/2pgYq5HLNHA

4. Spring into Art - Emilie Jordao • Matt Hisle • Jing Wang
   https://youtu.be/Vf2ykXs6sIY

5. Urban Agua - Kellie Fenton • James Prendergast • Nelle Ward
   https://www.youtube.com/watch?v=vk2PjUJmhTU&feature=youtu.be

6. Make the Connection - Yue Li • Yanhua Lu • Yi Yang
   https://youtu.be/EdVDOQYy97Y

FURTHER READING


Previous UMass LARP urban design studio work and publications sponsored by the UMass Amherst Design Center are available for download at scholarworks.umass.edu