Revitalizing the South End -
The Gateway for Downtown Springfield

Designing a Vision for
the South End Urban Community

Urban Design Studio         Spring 2009
Frank Sleegers, Assistant Professor
MLA, DIPL. - ING. Landschaftsarchitekt

Barbara Constable            Brian Giggey            Chris Jennette
Megan Plante                 Diana Slawniak             Ben Webb             Duanchai Yomdit
TABLE OF CONTENTS

Page

3  Table of Contents
4  Acknowledgements
5  Participants of the Urban Design Studio
6 - 10  Studio Format, Goals, and Objectives
11 - 17  Site Analysis and Assessment - Understanding the Area and the Site
11  History of the South End
12  Demographics
12  Topography and Hydrology
13 - 14  Landuse
14 - 15  Transportation
15 - 16  Open Space and Vacant Land
17  Urban Form
18 - 51  Design Proposals
18 - 27  Brian Giggey, Megan Plante, Ben Webb
28 - 35  Barbara Constable and Duanchai Yomdit
36 - 47  Chris Jennette, Diana Slawniak, Julie Meyer
48 - 51  Zhujun Kong and Deb Zervas

Appendix A
52 - 56  First Impressions of the South End, by Studio Participants

Appendix B
57 - 58  References and Bibliography
Acknowledgements

The Department of Landscape Architecture and Regional Planning was excited to work in the South End community of Springfield. This City has already made many good decisions and we hope to contribute with our research and creative work to catalyze these efforts. One special focus was the creation of greener streets that reduce water run-off and are a place not only for the automobile but for pedestrians and bicyclists. The latter are not considered in the recent plans and we encourage to integrate it to offer an alternative mode of transportation for the residents of the South End and the whole City.

The work of the Graduate Urban Design Studio 2009 describes a comprehensive and process-oriented way with various facets that is documented in this report.

We want to thank the Springfield Department of Planning & Economic Development for their support.

We specially thank Scott Hanson and Samalid Hogan for their enthusiasm and great cooperation on this project.

We thank Michael Tully from the Springfield Parks Department and Joan Kagan from Square One for coming to our presentation in the community.

We also thank the residents of the South End community for their hospitality and their personal input.

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

I thank my colleagues John Taylor, Michael Di Pasquale, and Yaser Abudnassr for contributing in the interim presentation.

I thank all the graduate students in this Urban Design Studio for their great work, passion, and dedication to develop creative ideas for the South End.

Special thanks to Victor Czulak and Travis Johnson for their great help in layouting and editing this report.

We hope our Urban Design Studio can contribute to make the South End in Springfield a great place.

Prof. Frank Sleegers, Amherst, May 2009
Studio Format, Goals and Objectives

1. Studio Goal
To design the South End as the future gateway for downtown Springfield that will help to transform it into a vibrant urban community.

2. Studio Project Area
The South End neighbourhood of Springfield is located just south of downtown, along Main Street with State Street to the North and Mill Street to the South. It is the southern gateway to the City from Interstate 91 and a small urban neighborhood composed predominantly of single and two-family houses. There are a series of retail storefronts along Main Street which include some of the City’s best known restaurants and shops. Our design area is the area around the Hollywood district – identified by 24 historic, four story masonry buildings built between 1913 and 1927. Some of the properties have become dilapidated resulting in tax title foreclosure and in some instances even requiring demolition by the City. The Hollywood district sits adjacent to Emerson Wight Park, a neighbourhood park established in 1920 to provide recreation to residents in the district. Unfortunately, in recent years, the park has become blighted and abandoned. This is partly because there are no houses or businesses facing the park. The Hollywood district has become blighted over the past ten years, and now suffers from crime, residential vacancy, and a disordered public realm that has negatively affected retail on Main Street. Specific challenges in this area include uneven circulation and way finding, an unusual number of dead end streets, disconnected streets, and unplanned open spaces created by the required demolition of dilapidated structures.

In 2006, the City of Springfield invited the Urban Land Institute (ULI) to the City to help map an immediate course of action for economic development. This road map touched on residential, commercial and industrial development and made wide-ranging recommendations. The ULI recommendations released in the fall of 2006 identified the South End as its number one priority neighborhood project.

3. Recent Programs, Plans, and Studies on the South End
GLC Development Resources prepared a report that studies in detail the retail and housing market conditions in the South End. GLC also created a revitalization plan and action agenda for the South End. The City and the South End Revitalization Coalition, a group of stakeholders, have refined the revitalization plan recommendations. A website has been created to keep the community informed: “www.Springfield-ma.gov/ SouthEndProject”.
From the work and the interactions with the Stakeholders and the South End community, the City has shaped the South End Revitalization Initiative. The Initiative is a series of connected public and private initiatives designed to systematically improve the condition of housing, open space, infrastructure and retail in the South End. The South End Revitalization Initiative is composed of ten components that are named in a sequence of time related priorities.

3.1 Recent Programs, Plans, and Studies on the South End
The South End Revitalization Initiative components are a framework for our Urban Design Studio. The ten components of the South End Revitalization Initiative are introduced and related to specific studio design objectives.

1. Main Street Improvements
Preliminary plans for the improvements were commissioned by the City. They include light fixtures, side walks, curbs, and cross walks. The executed improvements on Main Street Downtown are a scheme for the southern portion of Main Street that traverses through the South End neighbourhood.

Our design studio is focusing on the relationship between architectural edges as part of the streetscape rather than developing design solutions for the sidewalk improvement. Possibilities for urban infill development are explored with regard to appropriate land uses. Another important task is the creation of a gateway from the South on Main Street and several gateways on Main Street where crossroads tie into the Hollywood district.

2. Dwight Street Extension Improvements
The Initiative Plan is proposing to turn the existing Dwight Street Extension into a neighborhood boulevard with a median planting strip.

Our design studio explores architectural infill along Dwight Street Extension, makes proposals to organize street planting and parking. We will also incorporate alternative stormwater management on the proposed median strip as a model for more green infrastructure in the City of Springfield.

3. Improvement to Hollywood Buildings
The City has two investors who want to develop the buildings and streetscape of the Hollywood Blocks in the near future. One of the investors is currently revitalizing a similar type complex known as Worthington Commons located at the intersection of Worthington and Federal Streets in the City. Our design studio will adopt the proposal.

4. Replacement of Springfield Housing Authority apartments on Marble Street
The outdated 48 apartment units are planned to be demolished with a relocation of the residents in the neighborhood. Our design studio will explore housing infill in the Hollywood district that accommodates the demolished units. Potential infill areas include Saratoga Street and Dwight Street Extension.

Two design teams are developing a design alternative that keeps the public housing apartments on Marble Street and explores possibilities to improve the open space and vehicular and pedestrian circulation in close proximity.

Springfield South End Neighborhood Revitalization Project Components

- Redevopment of Gemini Site
- Ashmun & Marble Connections
- Improve Main Street Retail
- Proposed Public Housing Changes
- Main Street Improvements
- Redevelop Arlington Court
- Revitalize and Improve Hollywood
- Improve Dwight Street Ext.
- Emerson Wight Park Improvements
- Dwight Street Ext Connection

Projekt area: The Hollywood district and the South End in Springfield

The ten components of the South End Revitalization Initiative and their design objectives
5. Connection of Ashmun Street and Marble Street
The City wants to revitalize commercial activities on Main Street. Proposals and recommendations have been made by GLC. Our design studio will review the reports and recommendations and create a refined land use proposal, recommendations for new zoning as a planning tool, and physical design solutions and urban form that help to promote the South End as a gateway to downtown Springfield. Additionally, the studio will focus on the existing typology of successful businesses along the Main Street corridor and make recommendations as to how these business types can be better supported and integrated into the new Main Street design.

6. Improvements to Emerson Wight Park
The City plans to improve access and visibility to this park to make this underutilized open space an asset in the neighbourhood. Therefore the row of existing houses on the southern edge of Marble Street are planned to be demolished and new market rate housing is proposed on the western edge of the reconfigured park. Our design studio will adopt the proposal to realign Emerson Wight Park. We are seeking possibilities to integrate the new edges of the park with the urban fabric and to accommodate market rate housing units.

7. Dwight Street Extension connection to Wendell Place and Rutledge Avenue
The City proposes to extend Dwight Street Extension to Wendell Place and Rutledge Ave. This will improve connectivity in the neighbourhood to ease orientation and establish a coherent street network. Our design studio will adopt the proposal and explore architectural infill on the southern edge. We will organize street planting and parking to the edge to the Emerson Wight Park and accommodate both parking and pedestrian circulation. Vehicle circulation patterns should be explored for these newly created and reconnected streets.

8. Creation of new retail opportunities along Main Street
The City wants to revitalize commercial activities on Main Street. Proposals and recommendations have been made by GLC. Our design studio will review the reports and recommendations and create a refined land use proposal, recommendations for new zoning as a planning tool, and physical design solutions and urban form that help to promote the South End as a gateway to downtown Springfield. Additionally, the studio will focus on the existing typology of successful businesses along the Main Street corridor and make recommendations as to how these business types can be better supported and integrated into the new Main Street design.

9. Redevelopment for the Gemini Site
The City does not plan redevelopment on the Gemini site in the next five years but is looking for meaningful long term perspectives. Our design studio will develop design ideas that are process oriented solutions for short term use but with a high quality of appearance. Simultaneously we will develop a phased plan for the second long term perspective.

10. Redevelopment of Arlington Court
The City has an investor that will develop Arlington Court. This proposal will revitalize Arlington Court with commercial land uses. Our design studio will explore solutions to integrate activities on the Arlington Court properties with the revitalization effort of Main Street.

Open Space System
- Analyze and assess the open space system of the neighbourhood and how it relates to the city con text. We distinguish between nodal and corridor elements of the open space. In a coherent open space network the nodal open spaces are connected by open space corridors. Nodal elements include: Public parks and plazas, cemeteries, public and school playgrounds, forest. Corridor elements include: Sidewalks, pathways, recreational and bike trails.
- Identify missing links and connections and create a conceptual proposal for a renewed open space system.
- Create a hierarchy of open space nodes, create a hierarchy of open space corridors.
- Identify areas where the pedestrian system conflicts/matches the vehicular system. Look carefully how pedestrian movement is facilitated or not.

Natural Systems: Topography, Water, Vegetation
- Analyze and assess the topography of our project area.
- Identify major rivers, streams, lakes and ponds and describe major watersheds. Describe the specific water flow for our project area.
- Analyze sewage and storm water system of the area.
- Analyze and assess permeable and impermeable surfaces. Include methods to increase infiltration in your design proposals.
- Analyze and assess existing trees including street trees.

Urban Grain and Structure
- Analyze and assess the urban grain of our project area in figure ground drawings. Understand how it reflects the use of the land. Identify empty lots.
- Analyze and assess general ownership of the residential areas: owner occupied vs. renter occupied.
- Develop the urban grain in the South End. Explore alternatives in figure ground drawings. Use case studies of successful figure grounds to support your design ideas.

Cultural Milieu, Land Use, Zoning
- Analyze the cultural milieu including population trends, age, ethnic background, poverty, education, work force.
- Analyze existing land uses and develop a robust mixed use land use pattern that envisions future development with respect to the cultural milieu.
- Describe the specific uses of the buildings.
- Identify undesired land uses and articulate new zoning as planning tools.
Site Analysis and Assessment - Understanding the Area and the Site

Introduction
In 2006, Springfield invited the Urban Land Institute (ULI) to the city, to help map an immediate course of action for economic development. The recommendations of the ULI identified the South End as the number one priority neighbourhood project in Springfield, and jump-started the City’s South End Revitalization Project: A series of connected public and private initiatives designed to systematically improve the condition of housing, open space, infrastructure and retail in the South End. There are ten initiatives in total.

Our studio purpose is to design the South End as the future gateway for downtown Springfield that will help to transform it into a vibrant urban community.

Springfield has a strong regional identity and is home to many colleges. It is often referred to as “a city of homes,” and is known for having a vibrant walkable mixed use urban center with a number of museums, significant architecture and cultural assets. Additionally, Springfield is known as being a particularly business friendly city, as well as being a green city with just over 24,000 acres of park land.

History of the City
Springfield MA in Western Massachusetts was founded by William Pynchon in 1636 and became an important city for industry and manufacturing since it was selected in 1770 as the United States Armory. The decline of industry in the United States after the Second World War and the closure of the Armory in 1968 affected the economy of Springfield heavily. Today health care/education/social services provide the base of the economy, followed by wholesale/retail trade and manufacturing. 150,000 people live in Springfield with a young diverse ethnic population.
• The old Basketball Hall of Fame has been turned into the health spa “LA Fitness” with mixed retail and restaurants. It provides work for 100 people.
• New firms in Springfield engage in Biotechnology
• The whole 3.2 mile long State Street corridor is under redesign for$13,000,000.
• The new Federal Courthouse is great architecture that already has a positive impact on the development of the surrounding neighbourhood.

Springfield with a 350 year history needs to showcase its cities assets to become a capital in the region. It has much to offer, and is home to New England’s largest companies like MassMutual Financial Group, Bay State Health, Smith and Wesson, Big Y food Inc.

History of the South End
The South End was settled in the 1860’s largely by Italian immigrants from Bracigliano a small town 20 miles east from Naples. The Italian heritage continues to be a strong cultural component in the city today. For example, in the 1897, the Mount Carmel Society was founded, which is an Italian American cultural institution that is based in the South End. In the 1960’s, the heart of the South End neighbourhood was destroyed to make room for Interstate 91. This caused a great number of people to move out of the area and it can be seen as the cause of many of the problems that we are facing today.
Graduate Urban Design Studio • LA 604 • Spring 2009

Site Analysis and Assessment - Understanding the Area and the Site

The Basketball Hall of Fame opened its doors in 1985 on the riverfront and continues to be a great tourist attraction, especially after the opening of the new facility in 2002. New development on either side of the I-91 corridor is successful but seems to have no positive influence for the core area of the South End around Main Street. An asset that is highly underutilized and disconnected is the Emerson White Park, constructed in the 1920’s. The deterioration of Emerson White Park is an analogy of the situation in the South End neighborhood today.

Demography, Median Household Income, Unemployment

According to the 2000 census, this part of the South End has approximately a 60% Hispanic population and about a 20% white, non-Hispanic population. The South End, in relation to Springfield, has a median household income of approximately $16,000 per year, compared to Springfield’s overall $30,000 per year. Unemployment is significantly higher in the South End, at 12.5% compared to just over 8% for whole City of Springfield.

Topography

The South End neighborhood is a flat terrace (70 feet above sea level) on a former flood plain of the Connecticut River. A steep slope on the eastern edge with a maximum elevation of 180 feet above sea level is defining our project area. This slope causes many water drainage problems that were identified during our site walks and through interviews with residents. Our objective is to investigate alternatives to distribute the sheet flow more evenly in the area.

Urban Watershed and Impervious Surfaces

The water quality of the Connecticut River and the Mill River is poor due to a number of Combined Sewer Overflow Outlets. Much of our design area has impermeable surfaces. Our proposals seek to reduce stormwater runoff on site via infiltration into the ground and reduction of impervious surfaces. The Emerson White Park could be a suitable area where the sheet flow from the steep slope could be infiltrated. Simultaneously it could reduce Springfield’s problem of polluting its rivers and streams after heavy rain storm events.

Land Use and Vacant Lots

There are largely three commercial areas in the South End: West Columbus Avenue, East Columbus Avenue, and Main Street. West Columbus Avenue has large size commercial land uses such as the Basketball Hall of Fame, LA Fitness, a hotel, and many restaurants which are integrated into the larger structures.
East Columbus Avenue has various smaller size commercial activities. Main Street in the South End portion has small shops, a little bit of mixed use and some residential uses on upper floors. Some buildings on Main Street are vacant and boarded up and demonstrate that the core area of the South End has problems with keeping businesses alive. Older buildings with up to 5 stories and mixed vertical land uses are predominantly located in northern area of the South End. Along Main Street the amount of one story buildings with single uses is increasing when we move to the South. This is another example of decreasing economical activities in the area. We also mapped an increasing area of used car dealerships towards the South. These areas are mainly impervious surfaces and are not a favorable experience for pedestrians.

East of Main Street we find primarily residential land uses in single houses or apartments buildings. Many lots are vacant in the South End. The most prominent one is the “Gemini Site” between Central and Morris Street. Many empty lots are adjacent to Dwight Street Extension. We are looking for alternative land uses on these lots. Some of them could transform into usable open space for the community. We are also proposing new land uses that would encourage diversity.

Street Network, Public Transportation, Parking

The I-91 corridor in the South End runs parallel to the riverfront and dissects the historic street system that once connected the South End with the riverfront. I-91 has two underpasses: Union Street in the North and Broad Street in the South. They are the only possible East - West connections to the riverfront. East Columbus Avenue and West Columbus Avenue are multi-lane one-way collector streets that are running parallel to I 91. The division by I-91 from the riverfront is a major problem that is hard to solve with feasible alternatives.

Main Street is the primary artery in the neighbourhood that connects to downtown in the North and Forest Park in the South. Many of the East-West neighbourhood roads dead end in the East and do not create a coherent network.

About 600 out of 3200 households in the South End do not have a car. 102 workers of the South End use public transportation regularly to go to work. Bus lines run frequently along Main Street with several bus stops. None of the stops in the neighbourhood provide a bus shelter. Bus racks are not provided to encourage using bicycles as an alternative mode of transportation.

A lack of parking possibilities was not Observed or addressed. Parking is accommodated in small lots or by on-street parking. The parking on small lots consists primarily on hard paved impervious surfaces.

Our objective is to create stronger, pedestrian-oriented connections from East to West and to promote the use of buses and bicycles.

Open Space in the Neighbourhood, Walkability, Biking, Street Trees

Emerson Wight Park is the major park in the Hollywood district. The three entrances are lacking visibility and clarity. The park could have a much stronger presence in the neighbourhood. Riverfront Park and the Connecticut River Walk and Bikeway are located in the western part of the neighbourhood but they are not directly accessible from there. Other important open spaces are the Springfield Cemetery which borders the South End to the North-East, approximately 0.5 miles from Main Street, and Forest Park 1.5 miles to the South.

In the South End most streets provide side walks that reinforce pedestrian connectivity. But the majorities of the sidewalks are in bad shape and need restoration. The sidewalks along Main Street will be redesigned during this next year. Our project area does not provide bike lanes on the streets. The new proposals for
refurnishing Main Street do not provide bike lanes. The only bike path in the area is located parallel to the Connecticut River. This bike path is not connected to the South End and dead ends close to the South Bridge in the South of Springfield. Many streets in the South End have street trees that are in fair condition. The density of street trees is decreasing in the southern area of the South End. East Columbus Avenue is has sparse tree planting.

Our objective is to reinforce the connections to the Connecticut River and create streets that are green and walkable.

Urban Form
We studied the urban form of the South End in a physical model and figure ground studies and compared it with successful retail/commercial districts of other cities that are identical in size. Especially the Main Street area in the southernmost portion is dominated by one to two story buildings and bigger set-backs. Both criteria do not reinforce architectural definition of edges that we found in the successful case studies. Weak architectural edges and empty lots are clearly visible in the urban grain.

We propose incentive and form based zoning to encourage edge oriented in-fill development with vertically mixed uses to give Main Street a sense of higher density and variety. In the residential areas we propose sensitive urban infill that respects the character of the district.

The study of the figure ground in our project area demonstrates the increase of clear architectural edges in the South End.

The physical model of our project area illustrates that the South End has an abundance of empty lots. A clear definition of the Main Street corridor is missing in the western edge.
VISION STATEMENT:
To reunite the pieces of the South End by “patching” the urban fabric through the use of urban infill and the creation of green nodes/corridors to make connections within the South End and beyond.

Human Goals:
- Create an environment in the South End that feels safe and welcoming to visitors and residents
- Improve and enhance connections to the riverfront and the larger Neighbourhood.
- Create a lively streetscape along Main Street that promotes social interaction, encourages business and allows for safe pedestrian activity
- Re-establish Emerson Wight Park as a valued neighbourhood amenity
- Celebrate the different cultural differences in the South End through creative design
- Relocate Columbus Circle to act as a true gateway to the South End

Objectives:
- Consider alternative circulation designs that will allow for better connections in and though the South End, as well as provide better access for emergency vehicles
- Encourage mixed-use designs, particularly along Main Street
- Enhance street and sidewalk conditions to accommodate vehicles, bikes and pedestrians
- Minimize gaps along the edge of Main Street; move parking to the rear and/or decentralize mass parking lots
- Creative uses of hardscaping, landscaping, street furniture and art to highlight the unique character of the South End and help establish a definitive sense of public space

We’ve also decided to design with the entirely plausible constraint that the Springfield Housing Authority (SHA) apartments at the end of Marble Street will not be demolished and converted to open space.
Section through Hollywood Mall looking Southeast – Existing five-storey apartment buildings flank the edges of the park. Moving inward, a wide sidewalk provides pedestrian accessibility and entry. Between the sidewalk and the parking lane is a vegetated swale, which infiltrates stormwater runoff from the street, sidewalk and buildings (excess stormwater flows into the sunken recreation space). The street is narrow, yet provides sufficient space for on-street parking, vehicular, and bicycle transportation. The Mall itself has a central sunken recreation space that doubles as stormwater infiltration. Seating is provided on the sides of the space with steps to provide access.

We identified 3 key areas and focused our designs here:
1. Dwight Street Ext, which we have redesigned – and appropriately, renamed, Hollywood Blvd. To avoid the confusing alternative of Dwight Street Extension, extension.
2. The former Gemini site is a significant piece of land, which has recently been remediated, but still sits vacant.
3. A section of underutilized space between Main Street and East Columbus.

We also identified a few key areas that need to be redeveloped but were outside the scope of our design areas:
1. Strong green corridor with connections to and along State Street, Union Street, Broad Street, and Main Street providing connection of the South End to the Connecticut River underneath I-95.
2. Making suggestions to relocate and redesign Columbus Circle giving this cherished monument a true space and ensuring that it is really more of a visual focal to those entering the area.
   a. Currently at Main and Locust St proposed relocation to 6-way intersection of Locust St, Mill St, Belmont Ave, and Fort Pleasant Ave.
   b. Main Street improvements would continue along Locust Street, ending at the new Columbus Circle.
   c. Rotary design will ease traffic congestion.
   d. Green space will provide an opportunity to daylight part of the Mill River and create a unique gateway to Springfield.

Brian Giggey, Megan Plante, Ben Webb
This Gemini site located in the South End of Springfield is a 3 acre parcel of land that used to be the home of a textile mill which burned to the ground in 2003. The site was contaminated until 2008, when it was fully remediated through funds by the Environmental Protection Agency. The Gemini site is bordered by Central St. to the East and Morris St. to the West. Central St, which is bordered to the east with row housing, is one of the busiest streets in the South end, connecting Main St to the larger context of the city of Springfield. Ashmun St, with its proposed connection to Marble St. and Emerson Wight Park, connects to Central St. at the corner of the Gemini site. Lastly, Morris St. is a very seldom traveled road since its one way service to Main St is lined with single family houses and only residents of the street use it.

Elevevated pedestrian crossings on Hollywood Boulevard prioritize and enhance pedestrian circulation over the automobile.

This Gemini site located in the South End of Springfield is a 3 acre parcel of land that used to be the home of a textile mill which burned to the ground in 2003. The site was contaminated until 2008, when it was fully remediated through funds by the Environmental Protection Agency. The Gemini site is bordered by Central St. to the East and Morris St. to the West. Central St, which is bordered to the east with row housing, is one of the busiest streets in the South end, connecting Main St to the larger context of the city of Springfield. Ashmun St, with its proposed connection to Marble St. and Emerson Wight Park, connects to Central St. at the corner of the Gemini site. Lastly, Morris St. is a very seldom traveled road since its one way service to Main St is lined with single family houses and only residents of the street use it.

This section is cut through the streets, housing units and parking lot at the northern edge of the site. It shows the overall relationship of the streetscape and how it relates to the architecture. The streets are defined on both sides by large trees with swales implemented to catch any runoff. Pedestrian pathways line the streets and connect to the houses the face the street.

The middle portion of the section shows the relationship of the architecture to the street and the trees that help create that experience. The section also shows the private gardens that overlook the parking lot and are shaded by large trees.
The pathways and streets are tree-lined, helping to define the open space in the center of the site. The central open space is broken up into two portions, one for passive recreation and the other for recreation. The recreational open space is a basketball court that is defined on two sides by a pedestrian path system and on the other two sides by amphitheatre seating. The amphitheatre seating is pushed into the landform with a large grove of trees helping to buffer the area from the street as well as the rest of the open space. The basketball court opens to the central open space which is an area that can be used by all that live in and around the Gemini site. The open space is carved into the existing landform in such a fashion that it creates three steps that line the edges of the space on three sides. This carving into the landform will allow the open space to double as an infiltration basin in times of heavy rainfall. One of the most serious problems with the South End was dealing with the storm water that came off the steep embankment just to the north of Ashmun St. This water flows down the existing grade, along Central St and will eventual settle in the central open space of the Gemini site.

The design for the Gemini site creates a sense of community for its residents by offering both private and public open space, along with recreation areas connects to the larger context. Having the public open space double as an infiltration basin is not only beneficial to the environment, but is also an educational benefit to the community. And by creating this sense of community through interconnected path systems and housing units, residents can police themselves and create a safe haven in this portion of the South End.

Back Street Main Street: Design Summary
Our final focus area is an underutilized portion of the South End between Main Street and East Columbus. The rebirth of this important area is part of our overall green infrastructure plan for the South End. We began by proposing the transformation of a presently vacant parcel of land (located near Diaz Market, on the corner of Gardner and Main) into a small pocket park. We envision this pocket park will serve as the nexus of two proposed green corridors. From the proposed pocket park, there is a visual connection across Main Street to Oswego Street – which leads up to the proposed Hollywood Mall. Also, across Gardner Street we proposed a new pedestrian way, which connects Gardner to Broad Street. We have dubbed this pathway “Back Street Main Street”.

Back Street Main Street differs from our other two focus areas, in that part of it has frontage on Main Street - and as such is more viewable and accessible to both residents and visitors alike. This area is important to the revitalization of the South End because it has potential to connect portions of Main Street (via Main Street itself or Back Street Main Street) to Broad Street. The Broad Street underpass is one of the few opportunities pedestrians have to get to the other side of the interstate. Enhancing the character and connectivity of Broad Street is crucial because it has potential to become a main pedestrian thoroughfare linking the Hollywood district and Main Street with the disconnected portions along the River front.

This design was formed, in part, from one of the recommendations made by the Urban Land Institute (ULI) which felt that the South End needed more areas of safe off-street parking. This design attempts to address that recommendation, but also making way for more than the typical single use, utilitarian parking lot. One of the goals of this particular focus area was to create a multi-functional typography that could be applied to other portions of Main Street.
Graduate Urban Design Studio • LA 604 • Spring 2009

Brian Giggey, Megan Plante, Ben Webb

Issues Addressed with BackStreet Main Street:

CONNECTIVITY – Green pedestrian corridors – making this area a space for people

STORMWATER – use of innovative stormwater management techniques including vegetated swales and permeable paving along pedestrian ways

AESTHETICS – enhancing the look and feel of the South End; creating a more welcome space for both residents and visitors

For this focus area, we also chose to incorporate the proposed hotel slated to be constructed on East Columbus Avenue between Gardener and Norwood Streets. We did not have the exact building dimensions, but attempted to predict what that building square footage and lot could look like. The design of areas such as BackStreet Main Street is important not only in reconnecting South End residents with the riverfront, but also enhancing these forgotten spaces could also entice visitors at the hotels to explore the South End.

This underutilized area, with all its overlooked spaces, is important to consider in the revitalization process of Springfield’s South End. Thoughtful, multi-use designs, such as BackStreet Main Street will aid in improving the natural environment, citizen health and business opportunities in the South End. Transforming this underused and blighted section off Main Street into a vibrant public space will also help enhance the social and economic possibilities along Main Street and possibly the South End as a whole.

Pictured here is the currently underutilized space between Main and East Columbus - the privately proposed hotel, that will front East Columbus, is shown on the left. This section depicts our proposal for establishing anew parking—a series of small pocket parking area. Also shown here, is the transformation of Main Street into a vibrant mixed-use corridor.

Bike Main Street Walk

Proposed Mixed Use Building Swale Walk Parking Parking Parking Parking

Parking Parking Swale Walk Swale Parking Parking

Hotel Parking Parking Parking Parking Parking Parking
Barbara Constable and Duanchai Yomdit
South End Neighbourhood of Springfield, MA
Barbara Constable and Duanchai Yomdit

Vision Statement
The South End Neighbourhood of Springfield, MA has the inherent potential to become a vital community in Springfield, and a destination location for those residing outside the city. Through the use of improved connections the area will be able to maximize its current assets and mitigate existing problems that detract from the area.

Goals and Objectives
The goals for the South End Neighbourhood of Springfield MA are to:
• Transform the area into a vibrant urban community
• Create a gateway for downtown Springfield
• Improve vehicular and pedestrian connections
• Integrate retail opportunities with the new Main Street Design

Program Elements
• Enhance gateways
• Create a clear circulation system with street hierarchies
• Stormwater Management
• Change zoning on Main Street to mixed use programming
• Improve open space and green connections
• Grocery Store and Community Center located in the South End

Design Overview
The city of Springfield already has a revitalization project set in motion for the South End Neighbourhood. Our design builds upon this project and takes into account community wants and needs.

The South End in relationship to open space and major destinations in downtown Springfield.

Vision: Improved connections in the area will maximize current assets and mitigate existing problems.
Barbara Constable and Duanchai Yomdit

The first step is to adopt the city’s proposal of connecting Ashmun and Marble Streets. This will reduce the number of dead end streets in the South End and create another strong connection between Main and Central Streets. This new road will become a boulevard as there will be housing on one side of the street and Emerson Wight Park on the other. Plenty of onstreet parking will be provided for park users and visitors of residents. Dwight Street Extension is converted into a boulevard as well and extends South to Rufledge Street. This will again reduce the number of dead end streets and improve connections to the park and within the community. Dwight Street Extension will have trees running down the center and along the edges of the street. Additionally there will be bike lanes on each side of the street however there will only be onstreet parking on the side of the north travel lane. Between Saratoga and Oswego Streets on the side of the south travel lane will be a linear park with multiple nodes for benches and seating. There will also be a low wall behind this park to provide additional seating as well as to separate the space from the open area behind it. The area behind the linear park is specifically for the use of the residents living in the apartment buildings along Niagara Street. Included in this space will be community gardens, children’s natural play area and other spaces for the residents and their guests to gather outside.

Between the street and Emerson Wight Park will be a walkway and bikeway among three rows of trees creating an alley. The innermost row of trees will be spaced in order to create nodes for benches that will look out towards the park. Additionally, the edge of the park closest to the residences and hill will have an infiltration swale with a few areas for detention ponds and a walkway running along it. This will not only help to prevent excess stormwater runoff but will provide an area for increased biodiversity and be an interesting and potentially informative area in the landscape. This feature could be educational by installing a few informative signs along the walk that explains what the swales and detention ponds are and why they are there.
Infill housing across the street from the park will be townhomes with private garden spaces in the front and rear of the house. Other infill housing will be townhomes, duplexes or single family homes that fit in with the character of the neighbourhood. Along main street, the buildings will all be mixed use with retail space on the ground floor, commercial or professional space on the second floor and residential space on the third and fourth floors.

The future development site between Main and Oswego Streets will be turned into a small park/plaza area for pedestrian traffic only. This will promote the flow of people from Main Street to Emerson Wight Park especially as this area is next to an existing bus stop.

Across Main Street from this potential plaza is Diaz grocery story and Gardner Street. Further along Gardner Street is the future site of the Hampton Inn. There will be increased tree plantings along Gardner Street and the sidewalk on the North side of the street will be expanded in order to accommodate greater pedestrian flow and to provide space for restaurants to have outdoor seating as well as for retail stores to have sidewalk sales. The Arlington Court area will be developed with mixed use buildings and Arlington Court itself will be removed. Parking will be available along one side of Gardner Street and there will be bike lanes on both sides.
Sheet flow from steep slopes east of the project area is collected in grass swales and distributed into Emerson Wight Park.

The Gemini Site along Central Street will be redeveloped with a 20,000 square foot grocery store on the Main Street side and a community center on the Ashmun Street side. The area between these two buildings will be used as a small parking lot for the grocery store and as community gardens and green open space to be used by the community center for sports or other outdoor uses to suit the needs of the community.

Summary
Reducing the number of dead end streets will increase the amount of traffic along these streets (both pedestrian and vehicular traffic) and therefore can reduce the level of crime in the area by increasing the level of daily activity occurring here. Increasing the amount of mixed use buildings along Main Street will also increase the amount of activity in this area at all times of the day. This will be a benefit to existing business by attracting more customers to the area. This will also benefit local residents by providing additional amenities and job opportunities to the area.
Art as Process
Public art and planting design as community process are the two strategies we have identified as a way to engage the South End neighborhood. Movable art walls can be installed in the pedestrian alleys off of Main Street and the many vacant lots in the neighborhood. Murals and graffiti art can be painted on abandoned buildings; contests may be run to get community artists to express their vision of “who is the South End today?”

Planting design as community process
This specific process involves two activities coordinated by the Planning Department: “Adopt-a-rain garden” events and using community meetings to choose planting medium for public spaces such as vines for the trellises on Main Street and trees along the infiltration areas. We think that planting design is the most accessible to the general public and that many people already have a passion for.

Road Canopy Structures
A gateway to downtown Springfield from the South is created by road canopy structures. They create an edge where there is significant architectural setback from the road. These structures are approx. 350ft. tall. The arms, which are covered in flowering vines extend over the sidewalk and are part of the road creating a vegetative canopy. The structures give the South End a unique identity.

Vertical Swales
Further down Main Street the road canopy structures transition into vegetated vertical infiltration swales, which are located on either side of the road. The swales capture excess roof runoff, which is stored in underground cisterns. They span the width of the sidewalks and spaced approx. 30ft. apart so that there is room for in street trees. In addition to their stormwater function they define the sidewalk areas and create a unique identity for the South End. The vegetation on the swales can vary depending on their location: i.e. a vertical swale that is located in close proximity to a restaurant may be planted with herbs. The vertical swales with the trees form a unique urban green space.

Contests of murals on abandoned buildings in the South End could address the problem in a creative way: “Who is the South End today?”

Photo Credits: Michelle Kaufmann, West 8 Landscape Architecture, Banksy - Public Art, Ned Kahn - Wind Leaves
Graduate Urban Design Studio • LA 604 • Spring 2009

Chris Jennette, Diana Slawniak, Julie Meyer

General Recommendations for the Street Design in the South End
All Roads have been narrowed and sidewalks widened (at least 9 ft on Main Street). Curb extensions identify pedestrian crossings and improve walkability for the handicapped, the elderly, and children. Bicycle lanes will be accommodated on each side of Main Street and the major street corridors. On-street parking slows down traffic speed and supports commercial activities.

Pedestrian Alleys and Urban Plaza
Pedestrian alleys off Main Street will be closed for vehicular traffic and lead to an urban plaza in the heart of the Hollywood district. This plaza will provide a generous gathering place in the neighborhood that is missing today. The alleys are vibrant extensions of Main Street lined with restaurants, cafes, shops, galleries, etc. They encourage gathering, socializing, strolling, etc. One main feature of the alleys is large linear infiltration swales that run through centers of alleys. They are planted with tall grasses that mimic waves when they sway in the wind. Swales also contain trees, which increase stormwater infiltration while providing shade.

This design for Main Street creates a bold and memorable statement that sets the South End apart from the rest of Springfield.

Signage and planting will create a coherent streetscape in the neighborhood.

Planting design on Dwight St. Extension will turn the street into a green boulevard. Trellises between the apartment buildings define public and private space.

Road Canopy Structures create a gateway from the South. They create an edge where there is significant architectural setback from the road. The arms are covered in flowering vines and create a vegetative canopy.

New ways to define quality in architecture on the edge of Emerald Wight Park. The edge of the park is defined with multiple rows of trees that are still allow for visual connection from the outside.
Section of new Town Houses crossing Marble St. facing East

One-Way Street with Parking  4 Housing Units with Parking  Pedestrian Alley and Cross Walk to the Edge of the Park

Elevation of Dwight St. Extension facing new Town Houses on the western Edge of Emerson Wight Park.

Dwight St. Extension.

Grass Swales on Saratoga St collect runoff from the Street and adjacent hill slope

Saratoga Street will integrate sustainable Housing and a Corner Shop in the Hollywood district.
Vegitated vertical infiltration Swales are located on either side of Main Street. They capture Roof runoff which is stored in underground Systems.

All roads will be narrowed. Plantings on ample sidewalks accommodate pedestrian movement. Bike lanes on either side of the road accommodate alternative means of transportation.

Pedestrian alleys off Main Street will be closed for vehicular traffic. They encourage walking and gathering. Large planted infiltration swales run through the center and are part of the experience.
Springfield’s South End is surrounded by various and distinct districts including a vibrant downtown, a newly revitalized riverfront, a heavy commercial area along access roads and residential neighborhoods. Also present are open spaces – the abandoned Highlan Trail, Forest Park – and the dominating interstate highway. Very different land uses and scales associated with these areas, from Victorian family homes to subsidized housing, car dealerships and auto repair shops to Mom-and-Pop retail, residential to highway streetscapes, professional sports venues to small parks, and high rise office buildings to community businesses present an especial challenge for revitalizing the centrally located South End. Also important for any successful South End master plan is acknowledgement of its changed demographics since the 1960’s. The Hollywood district there is no longer primarily working and middle class Italian; instead its population is now predominately poor Puerto Rican immigrants, a large proportion of whom do not speak English, and are considered linguistically isolated. The Hollywood district is the focus of our proposal.

Our goals for the Hollywood district of the South End are that it will have a sense of place, a genius loci. We envision a diverse and integrated community that become well connected to the downtown, riverfront and other Springfield neighborhoods. We believe that a Hollywood district so envisioned can, as a whole, serve as a “gateway to downtown”.

Our general design objectives are:

- To weave together the disparate land uses bounding the South End using Main Street as a seam
- To create an urban “mixing zone” for residents, visitors, and city workers
- To soften the scale discords of housing types, roadways, land uses
- To create a spatial identity for the Hollywood district.
- To create an open space network

Our specific interventions are:

- A central plaza on Main Street, to announce arrival to the Hollywood district, and to foster mixing pedestrian streetscapes along Main, Gardner and Broad Streets featuring narrow travel lanes, wide sidewalks including space for cafe seating, benches, and plentiful street trees to encourage mixing and people watching
- Retail and office, some residential along Main Street including a grocery store. We propose that Diaz Market expands to Gardner Street
- Retail along Gardner and Broad to serve hotel and riverfront visitors
- Housing mix: apartment, multifamily and single family homes, including new homes on the Gemini site, with a small park adjacent.
- Strong architectural edge to the city-proposed Dwight Street Boulevard
- Open space/landscape buffers between commercial-residential uses, and between residential uses of differing scale
- A reconfigured Emerson Wight park with a treed, filter edge, and strong residential built character across the streets that border the park
- Bike pathways from Central Street to the riverfront, along Emerson Wight Park
- Street trees and tree lawns everywhere to reduce storm run-off. Due to a high water table in the area, infiltration remedies such as swales and basins are contraindicated.

The goal is a diverse and integrated community: well connected to the downtown, riverfront and other Springfield neighborhoods.

Figure Ground Plan of proposed and existing buildings.
Lastly, we recommend that the city of Springfield:

- Actively work to reduce the concentration of poverty in the Hollywood district, following the example of scattered site housing policies in use across the nation.
- Use urban forestry both to create and sustain community, and to foster environmental stewardship. The URI program, a partnership of the Yale School of Forestry, City of New Haven and the Community Foundation of New Haven is an excellent model and example.
- Develop a public participation plan to meaningfully engage the Puerto Rican community in any and all re-development.

The area between mixed uses activities and residential landuses is a walkable landscape with ecological functions to conciliate potential conflicts of use.
The Plaza on Main Street becomes a gateway for the Hollywood District and announces arrival.

The Plaza on Main Street will invite people to visit the Hollywood district.
The vacant lots West of Dwight Street Extension are proposed to be transformed into linear park for the neighborhood. Dwight Street Extension is renamed into Dwight Avenue.

The linear park along Dwight Avenue accommodates different uses. Some areas are used for community gardening.
Appendix A: Initial Impressions of Springfield’s South End by the Students

Zhujun Kong

Path: identifiable fabric, comparatively geometrical shape.
- Main street: narrow, busy traffic, sidewalks crowded, planting design is not so good, building façade is so different between two sections
- Other streets: quiet, planting is in good condition, Dwight street extensions maybe so wide; building façade is in the same style for Dwight street extension and Marble Street.

Architecture
- Red or brown brick facades with articulate ground floors have MA traditional architectural style.
- Different types defined different residential districts

Gap
- Some have trees standing in the middle or good background
- Some are the corridor of views
- Several are too narrow and with disorder background

Park
- Interesting topography, open space, planting design should be arranged, storm water management maybe interesting and effective
- Entry is not obvious.

Deborah Zervas

Urban fabric:
Bombed out, Swiss cheese, incoherent, few strong edges, characterless, little mixed use, single story commercial dominates lower Main Street.

Equity:
Segregated very poorly maintained neighborhood, underserved community, high unemployment, off premise landlord have ruined housing stock
Much too high a proportion of section 8 housing
The South End feels like a reservation

Vibe:
Cultural tension, no identity, no sense of place, some sense of community by ethnicity, a place of no hope

My first impression is that the problems of the South End are unlikely to be solved by urban design. What must be addressed first are: inequity in city services (snow plowing! Sidewalk clearing!), all out of code o-p landlord properties, high unemployment, drug use, city policy of housing segregation (instead of dispersal of section 8 throughout the city) etc.

The one exception to this analysis is that connectivity improvements will contribute to safety, by allowing greater police access
I dislike the “well-managed” section 8 housing examples shown off by Scott, because “projects”, no matter how amenable, isolate the poor. Not a good model for the Hollywood district – the district will not recover unless most housing is market rate, with fewer section 8 residences sprinkled in. Blocks and blocks of section 8 housing will deter any urban homesteading.
The current proposals will make a nicer neighborhood for the poor, but will not increase diversity by race, income, age, ability. They will not even promote gentrification.

Even though I am an urban pioneer, having purchased a home in a stressed New Haven neighborhood many years go, I would NEVER buy a home in the South End because of the project feel and because of the ethnic tensions.

The only interventions I would propose are equity based – community building, the aforementioned connectivity, improvements to the park, and storm water management. Changes in urban form in and of themselves will not remake the South End.

Duanchai Yomdit

South End is the smallest of the city’s seventeen neighborhoods, and is located immediately south of the Central Business District.
South End Neighborhood resident’s input about their desired changes and improvements for their neighborhood, especially future developments on City owned land.

The South End Neighborhood

- Small shops
- Convenience Stores
- Ethnic/Italian Flair
- Open Space
- Homes – Single Family – Garages
- Duplexes or Multi-family homes not single family homes
- 2-story (or more) buildings with apartments

Hollywood District:
This densely populated neighborhood is comprised of numerous 4-story brick buildings built predominantly in the 1920’s. Several of the buildings are now boarded and vacant. The redevelopment of this area continues to be a top concern for the South End residents.

Beset in recent years by crime, drugs and political corruption, Springfield has one of the highest rates of concentrated poverty in the nation, with the South End, Old Hill and Six Corners neighborhoods suffering especially high rates of poverty and unemployment.
Graduate Urban Design Studio • LA  604 • Spring 2009

Initial Impressions of Springfield’s South End by the Students

Chris Jennette

The air is a bit heavy in the South End of Springfield, Massachusetts. There is an enormous amount of potential in the area, but right now that potential is being wasted, as the area is full of burned-out houses, abandoned lots, and feelings of desperation. When we visit on Monday, the streets were full of ruts, as the plows hadn’t been able to move through, forcing traffic to move very slowly, and giving the area a more pedestrian feeling. As we were walking down the center of the streets, I couldn’t help but notice many people out and about on the streets and sidewalks, giving the neighborhood a strong personality. Some of these people smiled and spoke to us; others didn’t. The quality of the architecture and the open space that remains in the area is very ranged – some is in beautiful condition (such as the Hollywood buildings) and other buildings and spaces are in very rough shape – such as Emerson Wight Park. Overall, the impression I got from our tour was that there is much potential in this community to spring to life and return to its former vibrancy, if we can find a way to improve the space and lift the weight that is holding this community down.

Brian Giggey

The South End of Springfield is ripe with opportunity, but has a long way to go. Currently, the abundance of boarded up vacant homes and neglect to the neighborhood leaves one with a feeling of fear and remorse. The neighborhood could be so much more, but you can tell that safety is one of the main factors staring you right in the face. There is no maintenance in the neighborhood and many properties are fenced off. The fact that a lot of the streets are one ways and don’t connect to one another is a large problem. Extending some roads and connecting them will make for a much more logical, walkable neighborhood. The residents seem very eager for chance and I think a lot of good things can come from the demolishing of the 11 houses that face the Emerson Wight Park. With these houses removed, the road will be boarding the park which will increase its popularity as well as its safety. I really look forward to this studio as I feel like we can be a big help to this community. This is a real project and will be implemented, so any and all information we can gather as well as ideas we can muster will help this community become a destination in Springfield.

Megan M. Plante

Though it has many positive aspects, including location (proximity to downtown and I-91) and rich history, the South End of Springfield has a lot of obstacle to overcome in order to achieve revitalization. As a first time visitor to the area, the experience left me feeling sad and overwhelmed. The multitude of abandoned, burnt and boarded up buildings was quite depressing. However, I am excited about potential connections communication, which will help strengthen pride and ties within the South End community.

Ben Webb

On Monday, February 2, we had a site visit to the South End neighborhood of Springfield. We took a tour with Scott Hanson, one of the planners for the city. While driving around, it was quickly evident that the area is economically depressed and has not been awarded many capital improvement projects in the last 40 or 50 years. There is a lot of urban decay but the bones of the neighborhood are still good and could provide the support needed for future projects. The majority of the buildings are three to four floor masonry or brick buildings built in the late 1800s and are quite handsome in their architectural embellishments. Any design solution should try to incorporate a feeling of history. Historically themed street furniture, light poles, and other objects should be encouraged. New buildings should relate to the existing historical style, although they need not be copies. There are many holes in the urban fabric especially up or are vacant. However, many more buildings remain in good condition and have responsible owners. As this is an older neighborhood, many of the buildings share firewalls, which create a dense urban fabric. This lends itself to being a pedestrian friendly neighborhood; however, the problem is that there is not much to walk to. There are few stores along Main Street that provide daily needs and there are fewer jobs available to the residents that live in the neighborhood. The circulation in the area is a bit confused with many dead end and one-way streets. This is not a problem for pedestrians but is a large problem for vehicles and can encourage crime. The South End while geographically located adjacent to the Connecticut River is almost entirely cut off due to Interstate 91, an industrial district, and an active railway line. The vegetation in the area seems to be in pretty good shape. I did not notice any dead trees although there were many places where new trees could be planted. Most of the trees in the area seem to be doing well and have reached a mature size. The few residents that we spoke to seemed to care about their neighborhood but do not trust the city to do anything for them. Overall, the neighborhood is blighted but not beyond repair; it has problems as well as assets.
Graduate Urban Design Studio • LA 604 • Spring 2009

Initial Impressions of Springfield’s South End by the Students

Barbara Constable

The South End of Springfield, MA is an area in dire need of a change and worthy of being at the top of the priority list for the Springfield planning department. The proximity of the South End to Springfield’s downtown center, Basketball Hall of Fame, Interstate 91, the Connecticut River, and other neighborhoods in Springfield provide the area with tremendous potential for future use. The location alone is enough to draw people to live there. By removing existing substandard housing and replacing it with a variety of market rate homes, condos and rentals, will lead to a diverse population being located there. A diverse population along with small shops to meet the basic needs of neighborhood residents are steps that can be taken to create a viable and sustainable neighborhood.

Other Observations:
Removing homes near the park and changing the shape of the park will open it up for public access (more inviting) and use. Additionally, making Dwight Street Extension a boulevard will enhance the beauty of the area, increase open space, and provide an area to deal with storm water.

Diana Slawniak

• Grey
• Obviously economically depressed
• It seemed neglected and forgotten. The sidewalks had not been shoveled; the roads had not been plowed.
• It seemed abandoned even though we saw people in the streets and peering out their apartment windows.
• This is partly due to the vacant lots and partly to the many boarded up buildings
• There was no sense of neighborhood, just people thrown together into a bleak environment with bleak housing
• Pack seemed inaccessible
• Improved housing
• Demolish or improve buildings
• Green roofs
• Street trees, especially on main street
• Convert vacant lots to community gardens or playgrounds
• Improve vehicular circulation
• Provide visible access to the park

Appendix B: References and Bibliography


Urban Land Institute Case Studies and Books


Girling, Cynthia; Helphand, Kenneth, “Yard, Street, Park: The Design of Suburban Open Space” Wiley, 1994


Hester, Randy, ‘Community Design Primer’ Ridge Times Press, 1990


Larice, Michael, Macdonald, Elizabeth, „The Urban Design Reader”, New York, Routledge, 2007


References and Bibliography

Lynch, Kevin, “Image of the City” MIT Press.


Rubenstein, Harvey, "Pedestrian Malls, Streetscapes and Urban Spaces" Wiley, 1992

Sitte, Camillo, “The Art of Building Cities”, Reinhold, 1945


Volpe, Sleegers et a "Brickbottom Urban Design Somerville, Massachusetts, Edge as Center", 2006, 2007


Waters, Bob, "Sustainable Cities: Concepts and Strategies for Eco - City Development" EHN, Los Angeles, 1992


