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A Rail Decommissioning Project in the Heartland:

The Potential Integrated Economic and

Green Infrastructure Development

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A Rail Decommissioning Project in the Heartland: The Potential Integrated Economic and Green Infrastructure Development

By

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Dedication

This report is dedicated to Kayla for her unwavering support in the pursuit of my passion the last two years.

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A Rail Decommissioning Project in the Heartland:

The Potential Integrated Economic and Green Infrastructure Development

By

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The University of Texas at Austin, 2014

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The State of Illinois and Federal government have designated one of three major rail corridors bisecting Springfield, Illinois, to be retrofitted to accommodate future high-speed rail traffic. The three corridors that bisect the city are known as the 3rd Street, 10th Street, and 19th Street corridors, each running north to south through the central city area. The approved plan completely decommissions the 3rd Street Corridor while expanding the 10th Street corridor to serve rail traffic currently using both of these corridors. Traffic to run along the expanded 10th Street corridor will include Amtrak's high-speed rail passenger service between St. Louis, Missouri, and Chicago, Illinois. The decommissioning of the 3rd Street Corridor in Springfield presents an opportunity for green infrastructure development in the form of a linear park. More broadly, this report argues that increasing quality of life amenities via the redevelopment of rail infrastructure provides a viable alternative economic development strategy for cities facing stagnant growth.

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Introduction

This professional report examines the economic development potentials of converting decommissioned rail corridors into linear parks in cities struggling with negative or stagnant growth. Particularly in former industrial cities in the nation's Rust Belt, the region stretching from the Midwest to the Atlantic Coast, rail corridors have either been abandoned, decommissioned, or consolidated as local and regional economies have shifted from manufacturing to service industries. Since service industries now make up a larger share of jobs rather than manufacturing (Short, 2011), redirecting economic development efforts towards attracting *people* as well as investment dollars is critical. In this context, decommissioned rail corridors provide an opportunity for Rust Belt cities to increase access to green space but also to improve quality of life, and in the process reimagine their strategies for economic development.

This report focuses on Springfield, Illinois, which is confronting just such a challenge. Located on both major auto and rail routes between St. Louis, Missouri and Chicago, Illinois, Springfield boasts access to two major interstates as well as rail lines connecting the south, southwest, and east. Partially because of its strategic location, Springfield has been designated as a recipient of MAP-21 funds from the State of Illinois and the United States federal government for high-speed rail development along one of three existing corridors. Of these three corridors, the 10th Street corridor will be expanded to accommodate consolidated lines now on the 3rd Street Corridor as well as

high-speed passenger service, while the 3rd Street corridor which crosses the city through the downtown area will be decommissioned entirely. The third corridor bisecting the city, the 19th Street rail corridor, receives only a small amount of freight traffic and will be improved, but will not be decommissioned.

Specifically, this report will examine the possible economic benefits of pursuing a green infrastructure redevelopment strategy for the decommissioned 3rd Street corridor and the orphaned parcels associated with the 10th Street expansion. Drawing on current theory in brownfield remediation research, economic development strategies, and successful case study exploration, this report will investigate both the possible challenges and best practices associated with such a redevelopment strategy of decommissioned transportation infrastructure and how those lessons learned could be implemented in a slow-growth Midwestern city such as Springfield.

The forthcoming high-speed rail project will have two primary effects on land development and parcels in Springfield: 1) the 3rd Street corridor will be completely decommissioned, and 2) the 10th Street corridor will be expanded to accommodate the consolidated rail traffic. This will cause portions of many acquired land parcels to be considered undevelopable along the 10th Street corridor, as the vestigial parcels left behind will likely neither be large enough to meet local zoning regulations as "buildable lots" for viable development, nor located far enough away from the corridor to be considered sufficiently desirable for development as new housing or retail/commercial projects. This provides the city with a unique opportunity to redevelop both the corridor

and the orphaned parcels as green infrastructure assets to the community. In particular, a linear park would be the most feasible option for the 3rd Street corridor as it could also function as an economic development tool, connecting residents across the length of the city while attracting more visitors to Downtown Springfield where local amenities, features, and planning and commercial initiatives already exist to boost economic activity and tourism. Ideally, it would also encourage additional growth downtown as more people engage with the redeveloped project and the nearby amenities as a recreational space or alternative mode of transportation.

Rust Belt Cities, Changing Economies, and Opportunities for Redevelopment

Many cities across the Midwest have experienced stagnant growth – if not outright population loss – over the last half-century. Springfield is no exception to this. According to the United States Bureau of Census data from the 2010 Census, the population of the city was 111,454 in 2000 and 116,250 in 2010 – an increase of only 4.3% - less than half the 9.7% growth rate of the total United States population.

Year	Springfield	Sangamon County	State of Illinois	United States
1950	8.1%	11.51%	10.32%	14.5%
1960	2.0%	11.45%	15.71%	18.5%
1970	10.2%	10.10%	10.25%	13.3%
1980	8.6%	9.14%	2.81%	11.5%
1990	5.6%	1.30%	0.04%	9.8%
2000	5.9%	5.92%	8.65%	13.2%
2010	4.3%	4.51%	3.31%	9.7%

Figure 1: Population Growth Rates. Source: United States Bureau of the Census.

As seen in Figure 1, this is only the latest in a series of less than stellar growth rates. Compared to other communities in the Central Illinois area, such as Bloomington-Normal and Champaign-Urbana, Springfield lags significantly behind in growth. Of course, both of those cities are major college towns in Illinois, with Illinois State University in the former and the flagship institution of the University of Illinois Urbana-Champaign in the latter. When considered in relationship to other similar Illinois communities (Peoria, Decatur, and Quincy), however, the picture markedly improves but still underscores the rather slow growth the city experienced since 1980.

Year	Bloomington-Normal	Champaign-Urbana	Decatur	Peoria	Quincy	Springfield
1980	20.3%	3.4%	18.7%	-2.2%	-6.0%	8.6%
1990	15.2%	6.1%	-10.8%	-8.6%	-6.8%	5.6%
2000	19.8%	4.1%	-2.4%	-0.5%	1.7%	5.9%
2010	17.2%	17.7%	-7.0%	5.3%	0.7%	4.3%

Figure 2: Central Illinois Cities' Population Growth Rates. Source: United States Bureau of the Census.

When compared to other Midwestern capitals immediately surrounding Illinois, Figure 3 below paints a more optimistic picture of Springfield's growth. Though the city did not grow as rapidly in the mid-20th century, Springfield has been able to weather the changes of population distribution slightly better than other similarly sized cities in the Midwest. Evansville, Indiana, Green Bay, Wisconsin, and Independence, Missouri have seen drastic declines in growth, if not outright population loss. Overall, Cedar Rapids, Iowa has grown at a very similar rate as Springfield.

Year	Cedar Rapids, IA	Evansville, IN	Green Bay, WI	Independence, MO	Springfield
1950	16.4%	31.3%	14.1%	14.5%	8.1%
1960	27.3%	10.0%	19.4%	14.3%	2.0%
1970	20.2%	-2.0%	39.5%	-5.0%	10.2%
1980	-0.4%	-6.0%	0.1%	-12.8%	8.6%
1990	-1.3%	-3.2%	9.7%	-3.8%	5.6%
2000	11.0%	-3.7%	6.1%	2.2%	5.9%
2010	4.6%	-3.4%	1.7%	-6.1%	4.3%

Figure 3: Population Growth Rates in Similar Midwestern Cities. Source: US Bureau of the Census.

Springfield's local economy will be discussed at length in a later chapter, but here it is important to note the overall economic development story of Springfield. At the turn of the 20th century, the city relied heavily on manufacturing as a primary employer. The city's unique situation of having three significant rail corridors spanning its north-south length aided in the shipping of those manufactured goods. As many of those industries either closed their doors or relocated elsewhere in the mid-to-late 20th century, the city shifted towards a more service- and medical-based economy, with the public sector becoming the primary employer in the area (in the form of the State of Illinois), then replaced by the medical sector (in the form of local hospitals and clinics) in recent years.

As current freight and passenger services through the area grow in demand (Hanson Professional Services, 2005), the city is once again faced with how to balance service demands and infrastructure needs in a way that makes the most sense for the city, its people, and its economic well being. As the 3rd Street corridor is decommissioned, the city has an opportunity to receive a substantial return on investment, both economically and socially, from the implementation of a project that increases residents' quality of life

while supporting sound and viable economic development strategies. Unlike other cities in the area such as Bloomington-Normal that has but one rail corridor, Springfield provides a laboratory to explore how a city can thoughtfully engage both rail consolidation and a redevelopment process that treats decommissioned rail infrastructure as an asset and not a liability.

Research Questions

Successful examples of the use of former railways as green infrastructural elements show up in cities across the country, creating food for thought in planning magazines, journals, and panel discussions. Given that "rails to trails" is now a well-known tool in the planning practitioner's toolbox, this report aims to explore the following research questions, focusing specifically on cities in the Rust Belt facing similar stagnant growth while confronting the decommissioning of rail infrastructure:

- How have cities addressed changes in their transportation infrastructure stemming from changes in industry and transportation demands?
    - Specifically, how have cities approached the redevelopment or reuse of decommissioned railways?
- What are the best practices associated with green infrastructure development of former transportation sites while considering economic development needs?
    - Specifically, what are the models and best practices for green infrastructure redevelopment on decommissioned railways while considering economic development needs?

Many popular examples of "rails to trails" infrastructure are large scale, or at least located in cities which have far more economic power than a Midwestern city the size of Springfield. Given that reality, the final research question examines the applicability of lessons from larger urban areas for medium-sized cities such as Springfield:

- How can the successes of the lessons learned from green infrastructure development guide and affect the redevelopment of a decommissioned rail corridor in Springfield while providing for economic development opportunities?

The goal of this research is to establish how communities of any size can approach their unused rail infrastructure in a manner that benefits the city's residents by increasing their access to green space and integrating green infrastructure into economic development plans. This research not only applies to cities where rail consolidation is a necessity because of an increased demand of rail transport, but also where rail infrastructure has been abandoned altogether because of a lack of demand.

Chapter Outline

The first part of chapter one will discuss relevant theories of economic development, shrinking and slow-growth city planning, green infrastructure, and brownfield remediation. Part two will further expand on green infrastructure as a tool for economic development by highlighting specific case studies and what made them successful. The second chapter examines the history of rail and economic development in Springfield and reviews the current city, state, and federal plans for freight and high-

speed passenger rail growth in the near future. The third chapter focuses on downtown Springfield as the primary locus of this redevelopment project, describing the existing built environment, land uses, and potentials for economic development through green infrastructure and public amenities provision. Chapter four provides recommendations for the design of the linear park along the 3rd Street rail corridor, focusing specifically on the types of amenities suitable there, their placement, and the justification for those placements. Finally, chapter five discusses the funding and implementation strategies available to the City of Springfield for a redevelopment project of this nature.

Chapter One: Green Infrastructure Redevelopment as a Means of Economic Development

In this chapter, I will first review four distinct bodies of literature that together inform a non-traditional, integrated economic development strategy utilizing green infrastructure as a means to increase quality of life and provide environmental benefits, while simultaneously furthering municipal and local private economic development efforts. The latter part of the chapter explores four examples of redeveloped rail lines as green infrastructure and community assets.

A: Theory

Traditional Economic Development and Its Strategies

Understanding the basics of traditional economic development theory is critical in order to realize how more non-traditional, innovative solutions can help reimagine how Rust Belt cities design and implement economic development strategies. Broadly defined, economic development is "the process of improving a community's well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy" (Moore, Meck and Ebenhoh, 2006, p. 5). As such, traditional approaches to economic development have typically revolved around strategies to attract firms to specific locations in order to drive job growth. This process involves the following direct inputs in order to function successfully: natural resources/supplies, built space or available land, and labor (Moore,

Meck and Ebenhoh, 2006, pp. 6-7). Essentially, traditional economic development theory is premised on the real estate axiom of "location, location, location," which limits the ability or desire of certain industries to locate in certain areas. The drive to make a profit is the primary objective of most companies, so the decision to locate headquarters or branches relates directly to the costs of those direct inputs: location relative to supplies, infrastructure and utilities, and existing or foreseeable business clusters.

In addition to direct costs, companies will consider indirect costs including available amenities, quality of life factors, and government policies. While the above direct costs are considered inputs to the production process, indirect costs are peripheral costs to doing business that are not immediately involved in the output process. These indirect costs lead municipalities and states to offer tax and other policy incentives to make up for a potential lack in these areas (Moore, Meck and Ebenhoh, 2006, pp. 7-8) or otherwise build a legal framework and infrastructure network amenable for economic development. Traditional local economic development planning thus typically involve the following steps, and in the following order: crafting a vision statement and stating goals; performing an economic analysis; identifying current and probable future economic development issues; drafting policies; and, creating strategies and defining implementation steps (Moore, Meck and Ebenhoh, 2006, p. 9).

Traditional economic development discourse is fairly predictable and typically revolves around two themes (Wilson and Wouters, 2003). The first of these is that cities are, and must be, competitive with one another. The closer the cities are located to one

another, the more intensely competitive they are given the likelihood that both cities are similar in the sorts of amenities and access to resources they can offer. The second is that cities rely on "daring developers" in order to obtain and maintain growth (Wilson and Wouters, 2003, p. 132). This perpetuates the idea that cities are the products of their regulatory structure and that the willingness of firms and developers to compete within that market is paramount to cities' economic success. Haughton and Allmendinger (2008) expand this train of thought by adding that the networks and partnerships built with others in addition to the city's own institutional capacity are equally important in order to obtain the "hard" outcomes created through traditional economic development plans.

However, this sort of economic planning operates under the assumption that a city is growing and needs to continue to grow. The second assumption is that the city in question is inherently competitive with other cities. Yet in the case of many Midwestern Rust Belt cities, and specifically slow growing or shrinking cities, competitiveness on a national – or even regional scale – is not an assumption one can make. Indeed, investment in distressed cities is low to begin with; waiting for large-scale, "daring" investors is unrealistic in many cases. In such cities, property tax revenues can be too low to even contemplate expanding gray infrastructure (such as laying utilities, paving roads, and managing traffic flows) in an effort to attract larger firms to new industrial parks. The cost of retrofitting existing urban sites can persuade prospective companies to look elsewhere. More often than not, cities and communities in this position are left with little other options than to look to alternative economic development strategies.

What happens to communities where this approach to traditional economic development is no longer viable? This brings the discussion to "new" economic development strategies, where drawing *people* to a place becomes as important as attracting new firms.

"New" Economic Development

In recent years, we have seen a shift in the types of economic development strategies used by these communities in order to capitalize on the opportunities that make them unique. While much of traditional economic development focuses on finding space for a specific use, many communities in the Rust Belt and Atlantic Coast are looking for uses for specific spaces that work together with adaptive re-use lands, aesthetic improvements, and educational opportunities. Some cities have chosen to focus on innovative vacant land redistribution efforts, such as Cleveland, Ohio, where vacant land is leased to interested parties in order to turn that space to a more productive purpose, whether that is urban gardening, green space creation, or a more commercial (allowable) land use (Cleveland City Planning Commission, 2011). Youngstown, Ohio repurposed former industrial sites into productive uses such as innovation hubs for new start-ups, meeting spaces for entrepreneurs, and even laboratories for budding research firms (Reuters, 2014). Remaining competitive is still key, but perhaps competitiveness also depends on being attractive to individuals, as well firms. In a "creative economy" (Florida, 2012), creating pleasant, desirable places to live attracts the sorts of skilled workers that many service and tech industry firms want to employ.

These changes in the approach to economic development were precipitated by the shift of the American economy from manufacturing to services, as seen in the figure below (Short, 2011). Being located near a physical, tangible resource is not as critical as it once was for many firms operating domestically. This fundamentally changes the traditional model described earlier in this chapter (Moore, Meck and Ebenhoh, 2006) as it directly affects one of the primary inputs of location choice for firms: access to resources. Service and innovation industries are not chained to a specific region in the way that manufacturing firms are, which offers a seemingly endless amount of locations from which to choose to locate. If this is the case, what, then, shapes a firm's choice of location?

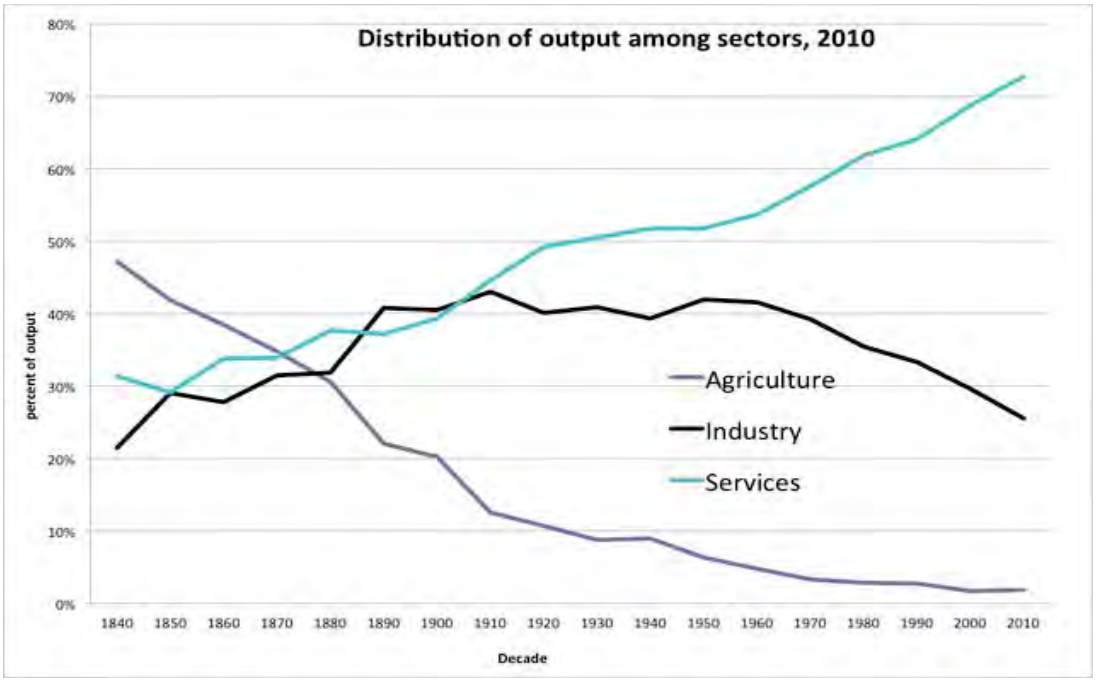


Figure 4: Distribution of output among sectors, 2010. Source: Louis D. Johnson, MinnPost.

To address this question, one can return to the required inputs for economic development as defined by Moore, Meck, and Ebenhoh (2006): built space or available land, and most importantly, labor. Assuming that available built space or land can be found in most cities, this leaves us with the question of labor. Firms want to locate where the people they wish to employ already live or where they would be willing to relocate. An excellent example of this is the boom of the tech industry in the Austin area, which started when Dell, Inc., moved to Round Rock outside Austin in the 1990s. The University of Texas was an additional draw because the university is producing the skilled workers that the tech industry wants. Yet one of the most significant factors for this rise of a tech cluster in Texas stems from the fact that Austin is *somewhere people want to live*. The quality of life in the area is high, the city is relatively affordable, there are plenty of cultural and recreational activities, and the city is consistently ranked one of the top nicest places to live in the country. Ultimately, since firms and workers, skilled or educated, are locating in areas with a high quality of life, planners must consider shifting a portion of their focus from attracting *firms* to attracting *people*. This, in turn, requires a different set of priorities for municipal planning.

If a city chooses to address the level of its quality of life, then those changes must begin with a visioning process that carries all the way through to the development of appropriate strategies and their implementation. Such an approach to economic development planning is particularly useful for cities with less capital and stagnant or declining tax bases because of their potential inability to create the physical conditions

(i.e. new gray infrastructure) to meet the demands of large firms. Focusing on smaller, connected strategies to retain and expand the population base could be more viable for these sorts of communities as opposed to large building projects.

Experiences across the country suggest that there exists a variety of ways to increase the quality of life within a slow growth or shrinking city. The investment in drafting a form-based code, for example, can help cities create a more aesthetically pleasing built environment, especially when greening measures are included through landscape and urban design requirements. Increasing the quantity and quality of partnerships within the community is also important, as seen in the increasingly important role of universities as catalysts for local economies (Youtie and Shapira, 2008). In Central Texas, Austin Community College is in the middle of rehabilitating the Highland Mall site into a mixed-use, New Urbanist tech and gaming educational center in response to the growth of the local tech industry.

Similarly, using city resources to coordinate with non-profit organizations and foundations to promote programs and initiatives aimed at local resident's quality of life is also useful. Finally, just because the existing economic development paradigm is shifting, this does not mean that the real estate development community does not play a very important role in new economic development strategies. City strategies and implementation methods may change course, but planners still rely on the private sector to produce the built environment within their communities.

A last major departure from the traditional economic development approach is the shift away from the notion that the economic development process is a "one size fits all" model. The idea that economic development is only achieved through attracting firms and growth does not hold true for many communities across the country. A study conducted by the University of North Carolina at Chapel Hill's School of Government in 2008 entitled "*Small Towns, Big Ideas: Case studies in small town community economic development*" describes how rural communities in particular must operate outside of the traditional economic development paradigm. Instead of following the traditional trajectory of economic development, these communities capitalize on their unique assets to generate economic growth, whether these are local historic sites, proximity to natural assets such as recreational parks, or proximity to nearby populations like college communities or major thoroughfares like interstates. It is therefore important to analyze the particular geographic and historical contexts of each city when considering what strategies would most likely lead to increasing economic activity.

The Potentials of Shrinking and Slow-Growth Cities

These new economic development strategies are premised on flexibility and adaptability, which is particularly important for so-called "shrinking" cities that are experiencing negative or slow growth. While Springfield cannot be considered a shrinking city in the strictest sense since it has experienced modest growth, this

theoretical framework provides important lessons as we consider the opportunity at hand in Springfield.

One of the leading scholars of shrinking city theory, Justin Hollander, described the Shrinking Cities International Research Network (SCIRN) definition of a shrinking city in 2009 as "a densely populated urban area with a minimum population of 10,000 residents that has faced population losses in large parts for more than two years and is undergoing economic transformations with some symptoms of a structural crisis (Hollander, Pallagast, Schwarz and Popper, p. 6)." Of course, in the United States the hardest hit area of the country was the Rust Belt particularly since the 1950s (Hollander et al., 2009).

The Rust Belt was once home to the great manufacturing cities of the Industrial Revolution. Because of the shift from manufacturing to service, Rust Belt cities now suffer from a multitude of issues, including large amounts of vacant land, declining or stagnating populations, and a lack of all types of investment ranging from real estate to public programming. This "shrinkage" of central cities has also been exacerbated by "relative growth in the suburbs, which cuts off city growth, and leads to decline" (2009). Authors Pallagst and Wiechmann (2005) describe this phenomenon as a "doughnut effect" or an effective hollowing-out of inner cities while growth increases at and beyond the perimeter. This has typically been explained by young parents' decisions to move where better schools are located.

Notable examples of the legacy of our post-industrial economy include cities such as Detroit, Michigan and Youngstown, Ohio, and the discussion around such declining cities has led to a perception of shrinking cities as blighted communities (Hollander et al., 2009). However, Hollander suggests that there is no direct causal relationship between neighborhood quality and population growth and loss, instead arguing that resident content and discontent vary wildly between shrinking and growing cities (2011). In fact, one can argue that because of the challenging situation facing these communities, planners have the opportunity to reinvent a city's image in ways that are more attractive to people and development.

Instead of seeing the "shrinking" process as a liability for firms or individuals, authors Martinez-Fernandez and Wu (2007) consider the presence of declining or abandoned areas as an opportunity of which to take advantage, or at least a problem to be solved. Since parcel and building vacancy rates unsurprisingly increase in these shrinking or stagnating communities, opportunities for reuse projects are a primary means to not only repurpose what would otherwise be considered an eyesore, but also to create points of departure for economic development. Planning in shrinking or slow-growth cities thus forces decision-makers and planners to identify key areas for economic development, and these targeted strategies allow cities to focus investment in specific areas of the community while maintaining a basic level of service across the city. According to Hollander (2009), "shrinkage [and its manifestations] offers planners the opportunity to

reimagine cities and their development" in ways that were politically or practically infeasible during times of economic boom (p. 27).

By default, effectively planning for these communities requires "green" and "sustainable" strategies (Hollander et al., 2009). Greening strategies produce quantifiable positive economic impacts on nearby property values (Wachter, 2005); properties next to or near parklands or open spaces tend to exhibit higher values. But in addition to the increase in amenity and property values within a community, greening strategies also produce additional benefits, including improved stormwater management, healthy food access, and grassroots economic development activities (Hollander et al., 2009).

Such green infrastructure-oriented redevelopment also includes focusing on ways to increase the quality of life, which is critical in successful planning initiatives (Pallagst, 2007). Quality of life improvements are now incorporated in historic preservation efforts and strategies to diversify the local economy, they are emphasized in mixed-use development, and they are used to support regional planning efforts (Hollander et al., 2009). In the following section we will consider how the redevelopment of brownfield sites using green infrastructure projects boost economic development by increasing quality of life.

Green Infrastructure as a Valuable Opportunity in Rail Corridor Redevelopment

Green Infrastructure Basics

The decline of manufacturing in the Rust Belt has not only hurt local economies, but also left a legacy of abandoned or under-utilized gray infrastructure. Questions of

how to address remediation needs as well as redevelop this land brings the concept of green infrastructure back to the forefront of American planning and urban design. The idea of green infrastructure began most notably with Frederick Law Olmsted, Sr. who believed that green and open space could not exist singularly as islands stretched across the urban landscape, but must be linked with other green and open space in order to better serve the urban population.

Green infrastructure is defined as "an interconnected network of green space that conserves natural ecosystem values and function and provides associated benefits to human populations" (Randolph, 2004), or "the interconnected network of open spaces and natural areas – greenways, wetlands, parks, forest preserves, and native plan vegetation – that naturally manages stormwater, reduces the risk of floods, captures pollution, and improves water quality" (Wise, 2008). As these definitions suggest, green infrastructure provides us with the benefits of natural ecosystems especially in terms of water quality, while providing open, natural space to residents.

Types of green infrastructure range from small-scale interventions such as community gardens, constructed wetlands, urban agriculture plots, stormwater management riparian zones, stream daylighting, rain gardens, green roofs, permeable pavement, and tree plantings (LaCroix, 2011), to large-scale units such as nature reserves, native landscape conservation, and regional parks (McMahon, 2000). Linking structures such as greenbelts or linear parks provides important benefits to urban landscapes as a means of stormwater management and biodiversity preservation (McMahon, 2000). The

most commonly agreed upon benefits of green infrastructure in urban areas are the following: increased water quality improvement, related positive public health factors, alternative transportation options and increased safety, increased connectivity, improved removal of pollution runoff from 30% to 90% (Wise, 2008), and finally, the economic impact of capturing the profits of emerging green markets (Schilling and Logan, 2008).

However, within established urban areas, the ability to insert green space is limited as the urban environment has been built up over decades or even centuries, and property values prohibit a community from buying and redeveloping centrally located parcels into park-land or green infrastructure. For Rust Belt cities, on the other hand, this opportunity can regularly be found in the profusion of brownfield sites left over as they transition from an industrial to a service economy.

Rail Corridor Redevelopment: Applying Brownfield Remediation Techniques

Abandoned rail corridors present communities with many of the same barriers as traditional brownfield sites, in part because of the perception of blight due to a lack of aesthetic quality compared to their surrounding environment. When rail corridors such as 3rd Street in Springfield come to mind, they are usually accompanied by thoughts of debris, accumulated waste, and most critically, danger. They are not considered sites of any particular use or significance to the community. However, the brownfield remediation and redevelopment literature provides important insights into turning perceived blights or burdens such as the 3rd Street corridor into valuable economic development assets.

According to an amendment to the Comprehensive Environmental Response, Compensation, and Liability Act (CERLA) of 1980, brownfield sites are defined as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence of a hazardous substance, pollutant, or contaminant (Davis and Sherman, 2010)." The United States Environmental Protective Agency (EPA) defines brownfields as "idle real property, the development or improvement of which is impaired by real or perceived contamination (EPA)" and as the main governmental agency providing grants for green infrastructure development, most cities and developers operate using this more accessible definition rather than the full CERLA definition of 1980. Examples of brownfields include gas stations, factories and plants, oil tank farms, buildings with asbestos, landfills, decommissioned military bases, and rail facilities among others (Hollander, Kirkwood and Gold, 2010).

Redeveloping brownfield sites have quite a few advantages. As areas that are considered "blighted" are made into community assets, important positive effects are felt throughout the community. In the words of De Sousa (2004, p. 598), brownfield redevelopment tends "to fulfill community desires, revitalize neighborhoods, and enhance the economic and aesthetic appeal of inner cities." This is particularly true in Rust Belt cities, where brownfields tend to be more highly concentrated (Collins, 2000).

In part because of these positive connotations, brownfield redevelopment is considered a politically and economically feasible way of assisting distressed urban areas (Greenberg, 2003). With a definitive beginning and end, the fear of becoming involved in

a never-ending improvement project is less of a political concern. On a federal level, brownfield redevelopment has been considered a vast improvement over the Superfund Site program. Secondly, brownfield redevelopment programs are a means of "focus[ing] on promoting and supporting industrial and commercial redevelopment, attracting private-sector investment, generating new employment opportunities and allowing municipalities to expand their tax base" (De Sousa, 2004). Also, in certain instances brownfield redevelopment can be considerably cheaper than improving and building on green field sites.

Aside from the availability of federal, state, and local grants to redevelop brownfield sites, there are additional economic incentives at play. Redevelopment of centrally located urban sites tends to offset the high costs of redeveloping brownfield and grayfield sites because the property value of the parcel is likely to be higher than the property value of a similar parcel in a suburban community (De Sousa, 2004). Ultimately, since brownfield sites are more often than not centrally located within a city, repurposing those sites for economic development offers a city all the advantages of green field development, but with a better location.

Much brownfield redevelopment focuses on repurposing sites for commercial or residential uses, but there also exists opportunities to introduce green infrastructure projects. In the case of Springfield and the 3rd Street rail corridor, the physical space itself is prohibitive for certain types of development. Adjoining parcels could potentially expand into the space for the purpose of increasing lot size or allowing for a larger floor-

to-area ratio, but the overall return on the investment would likely not be great; new businesses or homes could not be constructed within the confines of the corridor along the vast majority of its length. Given the spatial limitations of the site itself, the city is faced with a prime opportunity to develop a community-wide amenity in the form of a linear park.

Research by De Sousa and others support the validity of such a redevelopment trajectory: “converting brownfields of various sizes and conditions into greenspace is an important component of a more comprehensive strategy for improving the state of the urban environment and enhancing the quality of urban life, particularly among those US cities that have traditionally given greening a higher priority” (2004, p. 597). Indeed, communities across the country, even the globe, have recognized the benefits of applying green infrastructure typologies such as a linear park to the opportunities presented by aging or decommissioned transportation infrastructure, in particular old rail lines.

B: Examples of Planning Practice Using Green Infrastructure for Economic Development

Considering the boom of rail expansion in the 19th-century and the subsequent shift towards freight trucking, cities across the country are left with rail lines no longer actively traveled by trains. Many terminate at industrial manufacturing or agricultural sites that may or may not be vacant as well. An increasingly common trend among these communities is to reimage the use and value of these decommissioned rail lines as an opportunity to create greenspace, increase connectivity, and promote economic activity in the form of a linear park. This portion of the chapter focuses on a handful of examples showcasing the benefits and validity of employing a green infrastructure strategy on decommissioned rail infrastructure.

Springfield Example

Springfield is not a New York City or a Chicago, but this only reinforces the fact that Springfield has been given an opportunity to create a truly world-class amenity on par with the great cities of United States and abroad. Springfield has already shown its commitment to creating high-quality, engaging green spaces with the recent introduction of Southwind Park. Not your typical park with a playground and an excess of empty green space, Southwind incorporates LEED-certified building techniques with creative educational playscapes, communal outdoor facilities, and recreation opportunities into a development that has been received very well by the community itself. With creative

funding strategies and implementation efforts (to be discussed at length later), Springfield can draw on the success of Southwind while providing access to the central city.

Other Examples

As a way to see how green infrastructure could be used in Springfield to work as an economic development strategies, one can look to the successes of other linear parks along decommissioned rail infrastructure elsewhere in the world.

La Promenade Plantée – Paris, France

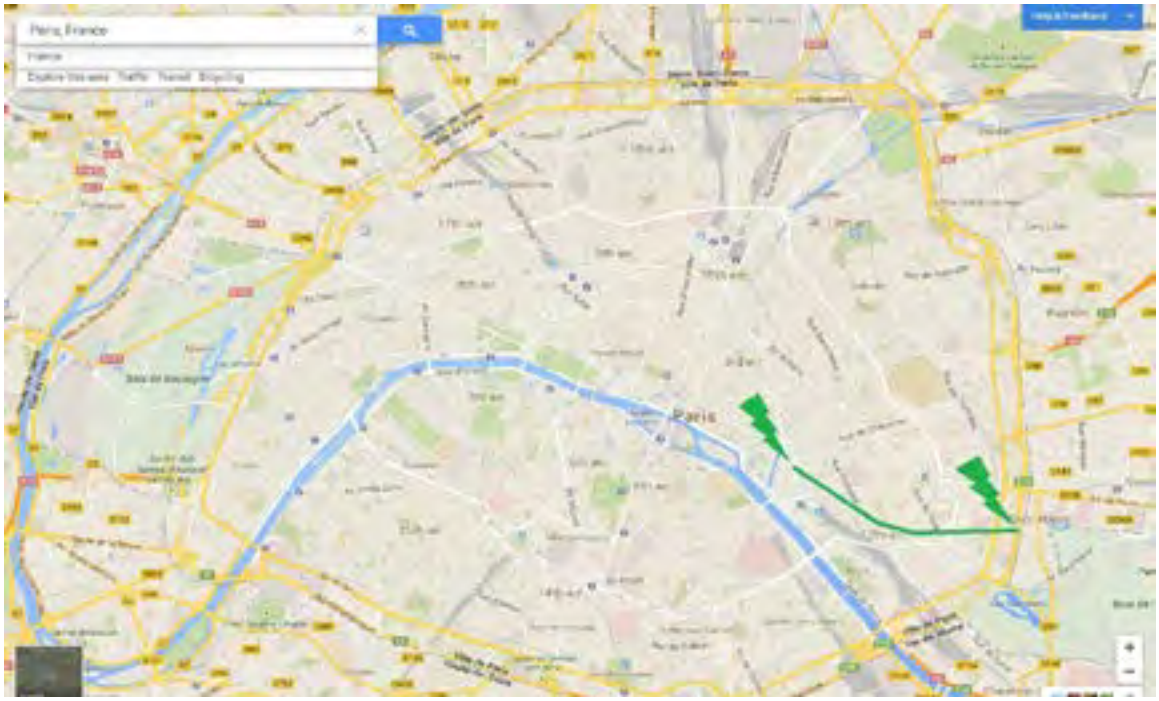
One of the first examples of a rails-to-trails redevelopment can be found in urban Paris, France. Conceived in 1988, la Promenade Plantée ("tree-lined walkway") is a pedestrian and cyclist paradise covering traversing the 12e *arrondissement*, or neighborhood, in southeast Paris, just north of the Seine River. Originally a rail line linking la Bastille (now the business district of the city) to Verneuil-l'Étang, a suburban community 35 miles southeast of the city, the corridor itself was decommissioned in 1969. In the mid-1980s, two local designers began crafting a master redevelopment proposal to rehabilitate its nearly three-mile length. Construction was completed in 1993 and has become a very popular park and trail way within the city (Smith, 2013).

Part of la Promenade is an elevated rail line, causing some to dub it the "High Line" of Paris – though more accurately the original High Line – but most of the trail itself is at ground level. La Promenade Plantée has served as a catalyst for economic activity in the 12e arrondissement with le Viaduc des Arts (a former water viaduct that served medieval Paris) over which the rail line traveled converted to retail shops. Pop-up

retailers and food vendors have also located along the trail. Overall, the design and implementation of this linear park was the first of its kind in any urban city, beginning a trend that would only begin to gain traction in the United States and other European countries over a decade later.

La Promenade Plantee
Paris, France

Top Right: Local Nomad Blog; Middle Right: Local Nomad Blog; Bottom: Google Maps, Paris Inspired.



The High Line – New York, New York

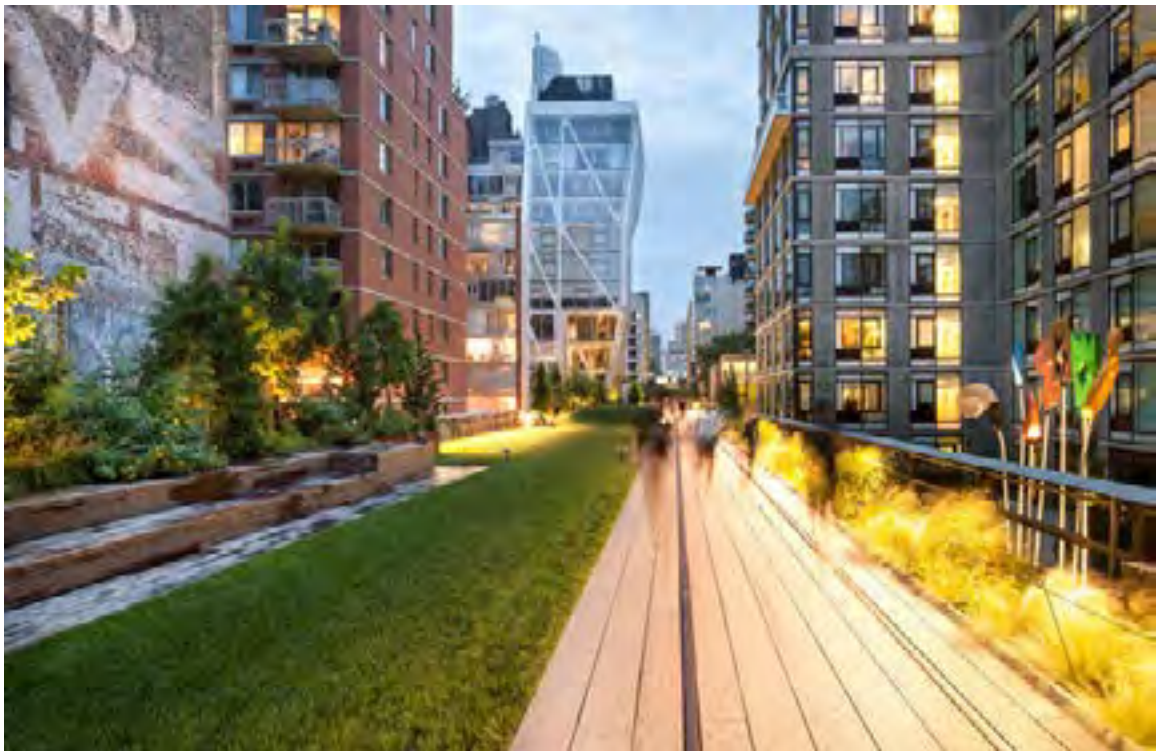
Arguably the best-known example of a linear park built over a decommissioned elevated rail line in the United States is the High Line located along Manhattan's West Side. The rationale for building the elevated structure in the first place was simple: public safety concerns. While the tracks ran along street level, so many accidents occurred with pedestrians and the newly popularized automobile that the City decided the tracks in the industrial corridor of New York City needed to be elevated (Friends of the High Line, 2011). Built in the 1930s, trains traveled this elevated urban corridor until roughly 1980, when the line was abandoned. In 1999, two local West Side residents founded an organization advocating for the preservation of the structure and its use as public open space called Friends of the High Line. The planning study and design phase of the High Line began in 2001 and continued until 2006 when ground broke on the phased redevelopment of the rail way. The first phase was completed in 2009 and opened to the public, with Phase 2 completed in 2011. A third phase began construction in 2013 and is slated to open to the public later in 2014.

The public response to the High Line has been incredibly positive. The park is not only a destination for local residents but also tourists from around the world. Most interesting is the success of the park in terms of promoting social and economic activity. What was formerly an entirely unused example of post-industrial blight has become a vibrant public space where public art installations and urban gardens can be found. There

is an entire sub-division of Friends of the High Line called High Line Food and Revenue Programs that not only conducts food programming for the park, but which also manages more than eight food vendors that locate along the High Line during the spring, summer, and fall seasons. Furthermore, according to *The New York Times*, the City of New York has estimated that the linear park will generate more than $4 billion in private investment and generate more than $900 million in revenues for the city (Cortese, 2008).

The High Line
New York, New York

Top Left: Paul's Web Blog; Top Right: Posh Appetite Blog; Bottom: The New York Times.



The 606 – Chicago, Illinois

Inspired by the success of the Friends of the High Line, the City of Chicago began evaluating the potential of the decommissioned Bloomingdale Trail in West Chicago, an elevated rail way which runs through the Logan Square, Wicker Park, Humboldt Park, and Bucktown neighborhoods. Of all Chicago neighborhoods, Logan Square currently has the least amount of open space per capita, prompting the City to begin the redevelopment project conversation with the residents there ("The 606 – The Story"). A partnership formed between the City of Chicago, the Chicago Park District, and The Trust for Public Land, culminating in a final design plan in 2013. The project itself began in 2014 and an official opening has been proposed for fall of the same year. The trail itself will be a space for pedestrians, cyclists, events, and public open space stretching 2.7 miles from west of Interstate 90 to West Grand Avenue.

The efforts to implement The 606 in Chicago are driven heavily by Mayor Rahm Emanuel's goal of creating a more sustainable, eco-friendly, green city while increasing the quality of life for all of Chicago's residents. This commitment to park space and quality of life by the country's most tech-job friendly state (TechAmerica Foundation, 2013) reinforces the argument that quality of life improvements will attract non place-based industries and businesses and strengthen business clusters.

The 606
Chicago, Illinois

Right: Chicago Tonight; Lower Left: The Trust for Public Land; Top Left: Chicago Tonight.

The Cultural Trail – Indianapolis, Indiana

Each case study provided thus far has discussed cities that are considerably larger in both size and population than Springfield. Each of these communities would arguably have an easier time funding and implementing such projects, but what about a community that is more similar to Springfield in terms of its geographic and demographic contexts? A recently unveiled linear park and trail system in Indianapolis, Indiana provides such an example but with a unique twist compared to the other case studies presented here.

Unlike many urban linear parks that are designed to provide an urban escape, the Indianapolis Cultural Trail was designed to be an urban exploratory experience (Indianapolis Cultural Trail, Inc., 2013). The Cultural Trail ties multiple newly designated cultural districts together along with public art projects and other amenities within the city along an eight-mile trail. Using the Trail as a means to connect existing amenities, Indianapolis fosters the theme of exploring its urban core while offering amenities to pedestrians, cyclists, and tourists.

Beginning in 1999 when the city created its cultural districts, Indianapolis started a campaign to raise the funds for design and feasibility studies for the trail itself. Once the combined city-county Metro government granted the city's right-of-way to be used for Trail construction in 2004, two local design firms were designated at the primary architects of the project. After generous private donations as well as funding from the federal Transportation through its Transportation Investment Generating Economic

Recovery (TIGER) grant program was secured, ground broke on construction in 2010. In May 2013, the Cultural Trail officially opened and has proven to be a popular amenity among tourists, residents, as well as urban design and public policy commentators.

The Cultural Trail
Indianapolis, Indiana

Top Right: The Atlantic Monthly; Middle Right: Real Report; Lower Right: Urban Indy; Lower Left: The Hilton Garden.

Reasons for Success: Drawing from the Lessons Learned

Springfield, Illinois has the potential to draw on the lessons learned from these projects as the city develops its own strategy for the 3rd Street Corridor. In each of the examples listed above, there are specific reasons for the success of the planning and design processes, the implementation of these plans and designs, and each final product, which should inform the planning processes in Springfield. Five factors distilled from these examples appear to be of significant importance.

Different Types of Partnerships

In all examples above, the success of each project getting off the ground depended on the incorporation of different actors within the design and building process. In each instance, it was not simply the local parks district crafting, funding, and constructing these parks; it was the joint effort of not only local elected officials but also non-profits, local businesses, and engaged residents that made these visions come to fruition.

Creative Funding Strategies

Traditional economic development funding usually goes towards infrastructure overhauls or expansions, or towards furthering the ability of a community to market itself better to corporate site selectors (Weitzel, 2013). For these projects however, funding came from multiple sources, and not always traditional ones. Using TIGER grants to fund an alternative mode of transportation is nothing new, but using it to create a community-

wide amenity in the form of a linear park and trail is a creative way of using available funding to accomplish community goals of this nature.

Public Involvement

In cases such as the High Line, it was community members themselves who acted as the catalyst for the development of the High Line project. Concerned residents did not want to see a historic structure torn down when it could serve an alternative purpose for the greater benefit of the community as a whole. In Chicago, the city recognized a need for open space in a neighborhood historically lacking an adequate amount of green space per citizen, and included those residents from the design process from the very beginning, understanding that a park sinks or swims based on the ability of people to access and engage the amenity.

Context-Conscious Design

Understanding that the specifics of one project may not be transferable to another project is equally important. La Promenade Plantée, the High Line, the 606, and the Cultural Trail are all similar in that they are linear parks which utilize some sort of transportation corridor, but each have very specific attributes that differentiate them from one another. La Promenade capitalizes on Paris' walking culture; the High Line leverages historical significance and modern design; the 606 incorporates local community efforts into its very design with its community gardens; and the Cultural Trail acts as a very deliberate guide to the amenities already existing, but spatially segregated cultural amenities. Each of these parks integrates the local context of the area and its people into

its design, creating emblematic focal points to each city as soon as they open to the public. Parlaying these reasons for success into a design for Springfield, Illinois is the major task at hand. As such, the historic and present contexts of Springfield are explained in the next two chapters as a means of leading to a point where essential design elements can be identified.

The following chapter will examine Springfield's history with rail, planning efforts, and economic development initiatives in order to most effectively imagine the ways in which redeveloping the 3rd Street corridor as a linear park will fit into the city's economic development strategy.

Chapter Two: Springfield

Springfield is a mid-sized city located in Central Illinois. As the state capital, it lies within a network of similarly sized, competing cities: Peoria, Bloomington-Normal, Champaign-Urbana, Decatur, and Quincy.

As of the 2010 federal census, the population of Springfield is just over 116,250 persons while the Springfield, Illinois MSA – consisting of Sangamon and Menard counties – counted just over 208,182 persons (US Census Bureau, 2010). The city is approximately 66 square miles, bounded on the south and east sides by the major US Interstates 55 and 72. Two of the three rail corridors that bisect the city are the primary subject of this report and are major rail corridors in the city, running more less along north-south lines. The Sangamon River, a tributary of the Illinois River and by proxy the Mississippi River, flows northeast of the city through mostly flat prairie lands. Small, more rural towns either surround or are in close proximity to Springfield.

Springfield is also home to a branch of the University of Illinois system as well as Benedictine University; an iteration of the Robert Morris College system, Lincoln Land Community College; and the Southern Illinois University School of Medicine. In history and popular culture, Springfield is known for three or four primary contributions to American culture – for good or ill: our 16th President, Abraham Lincoln; the popular television cartoon beginning in the late 1980s continuing to present day, the Simpsons; the original corn dog, or "Cozy Dog;" and an open-faced sandwich known as a Horseshoe, that has been featured on multiple shows on both the Food Network and

Travel Channel. The point of this snapshot, of course, is that while Springfield may not be spoken of in the same way as the likes of Chicago or New York, Springfield is not a rural wasteland or backwater; it is an established community with its own identity and contributions to our society and culture.

The History of Economic Development in Springfield

What is now Springfield has a long history of pioneering efforts: at one point the area was the frontier of the United States, and the city has continued to brand itself as an ideal location to move, grow a business, raise and family, and achieve the "American Dream."

In the early 1700s, fur trappers and Jesuit Missionaries from New France (now Canada) followed the river system from the Great Lakes to the Mississippi and began scouting the area now known as Springfield. Trade with local Native American tribes rapidly expanded and many settlements began to form along water trade routes in the area. Springfield itself was settled in 1821, just three years after Illinois was admitted to the Union as a state though it was previously considered a territory. When Springfield was founded, it was known as Calhoun and named after a popular state political figure of the time. As politicians are wont to do, Calhoun eventually fell out of favor with the public and the City of Calhoun renamed itself Springfield in 1832 after Springfield, Massachusetts, which was considered a model of Industrial City success at the time. Springfield became the third and final capital of the State of Illinois in 1839, partially as a

result of the efforts of then-state legislator Abraham Lincoln. Since that time, the State of Illinois has become an increasingly larger employer of local residents.

In 1871, a local man by the name of John Carroll Power wrote an economic development pamphlet for persons and organizations interested in relocating somewhere that was business-friendly. Written for the Springfield Board of Trade, Power discussed the local industries present in the city and county at the time: boilermakers, carriage and wagon factories, foundries and machine ships, ornamental carvers, mills, plow manufacturers, rope and cordage factories, sickle sections, soap and candle factories, woolen mills, corm planter factories, and watch companies (Power, 1871). Industries of this scale continued to be the prevalent form of business until the age of the assembly line in the early to mid-20th century.

Although Springfield was never the site of large scale manufacturers the likes of which cities such as Detroit or the Quad Cities saw in their heyday (though Springfield can claim its own car company, "Springfield Motor Cars," despite its lack of commercial success), the city had a number of factories located on the south and east sides of town including Cargill/Pillsbury, Allis-Chalmers, Fiat-Allis, Weaver Manufacturing, Hobbs, Bunn-O-Matic, and Sangamo Electric. The outputs of these factories ranged from foodstuffs to large-scale farming equipment, small household appliances, and textiles (Sangamon County Historical Society, 2012). As of the writing of this report, only Bunn-O-Matic remains in Springfield continuously manufacturing products.

As the mid-20th century progressed, the local economy in Springfield shifted away from manufacturing industries to the service sector. According to a feasibility study conducted by Hanson Professional Services in 2005,

> "…the years leading up to the 1960's saw significant changes in both rail and auto traffic, and significant changes to the city. At one time Springfield was a mining and manufacturing center with heavy demands on freight rail service. Over the years these industries began to decline. At the same time, state government, insurance, health care, and retailing began more and more to dominate the economy" (p. 1-1).

In the late 1970s, the State of Illinois, the telephone company Illinois Bell, and both Memorial Medical and Saint John's Hospital became the primary employers in the area (outside of agriculture in the rural parts of the county [or counties, if referring to the Springfield MSA]). This rise of the medical industry in Springfield is especially important when referring to increasing economic development in an area via quality of life amenities and improvements: if the city hopes to attract or retain the highly skilled and educated workforce necessary to the medical industry, there must be reasons for that sort of workforce to want to live and work in such an area. Increasing the vitality and vibrancy of the city through the incorporation of an amenity such as the linear park discussed here could be one of the ways to accomplish that goal.

The finance, insurance, and real estate industries (FIRE) also saw a significant increase as a presence in the city. While Springfield has lost some businesses in the this sector, Wells Fargo Home Mortgage, Horace Mann, AIG, and others continue to employ a significant amount of local residents in offices across Springfield.

Traditional strip shopping centers and an indoor regional shopping mall were developed, particularly on the west side of Springfield. These shopping centers are still heavily used to present day, as the city remains a regional retail center. The retail component in not unimportant to Springfield, as local property taxes paid to the city largely to go pay police and fire department employee pensions, leaving local government to depend largely upon local sales tax revenue to support city services.

Because of this, in more recent history, the city has made overtures to expand its commercial tax bases in what can be considered a more traditional approach to economic development: incentivizing. Aside from the usual Big Box stores like Wal-Mart and Target, the City of Springfield closed a deal with the grocery chain Hy-Vee to renovate and install a premier store in the central area of the city through a tax increment finance district. Downtown Springfield also uses a TIF district as a means to improve and attract new business to its more traditional downtown area (to be discussed in depth in the following chapter). On the extreme south side of the city near an exit onto Interstate 72, a regional shopping complex is in the process of being completed as part of an approved Planned Unit Development (PUD). It currently includes a Scheels Sporting Goods store, a new microbrewery, and several other restaurants. An outlet mall featuring high-end retailers is currently under development.

Green space development in Springfield has evolved along with the growth of the city. Thirty-four parks currently constitute the city's green space, and as the city does not have a green belt in or around its borders. All of the parks are owned and operated by the

Springfield Parks District and, aside from a open space plaza to the immediate west of the Abraham Lincoln Presidential Library and Museum, form a loosely concentric ring-like pattern throughout the city. However, although downtown Springfield is located in the middle of this ring of parks, no parks are located within easy walking distance of downtown. The park district also manages public golf courses though these have fees for usage. Similarly, the manmade Lake Springfield lies along the southeast border of the city, with many parks and recreational spaces, although this level of access continues to remain disconnected from many other green spaces within the city. Most recently, the local park district embarked on a commendable and extensive park construction process on the south side of Springfield known as Southwind Park, described extensively in Chapter Four.

Geographic Context, Illinois and Sangamon County

Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

Planning History Related to Economic Development

Planning in Springfield has evolved much the same way as it did in many other communities. After the Supreme Court of the United States ruled that zoning was a valid exercise of the power of states, Illinois began granting certain counties and municipalities home rule powers in the mid-20th century. Sangamon County itself adopted its first zoning ordinance in April of 1969. The need for more comprehensive planning arose around the same time in Central Illinois, especially in Springfield as the state capital.

For the City of Springfield, the Office of Planning and Economic Development (OPED) is primarily responsible for economic and community development, while the Springfield Planning and Zoning Commission is responsible for zoning and application of the City's comprehensive plan. Planning and development staff working in OPED focus primarily on facilitating new business creation (or attracting new businesses) within the city with services such as expansion and relocation assistance, business climate forecasts, TIF management, and utility-energy data (City of Springfield). The city partners with the Greater Springfield Chamber of Commerce, through what is called the Quantum Growth Partnership, in economic development. OPED does employ one person in a planning position, holding the title of Planning and Design Coordinator.

For the larger county area, and in certain cases for the city itself, the Springfield-Sangamon County Regional Planning Commission (SSCRPC), a joint body of the City and the County, is responsible for and assists with some of these duties. The SSCPRC

was created through the merger of City of Springfield and Sangamon County planning staffs. While this was originally an informal arrangement, with the two staffs co-locating and working together, they were officially merged in the 1980's by way of a County ordinance under the state's Regional Planning Act. For the last 50 years, the SSCRPC and its predecessor agencies had a more comprehensive mandate, covering not only strategic and comprehensive planning for the county and many of its cities and villages, but also transportation planning, environmental planning, comprehensive planning, land use planning (including zoning review for both the city and county), land development and land subdivision review, and policy research and analysis, on a county-wide regional level (SSCRPC, 2009).

In terms of planning efforts related to this report, there are a few items to note. For green space development, outside of plans to create regional bike paths, there is little in the way of planned green space currently ongoing. There is, however, a strong history of the SSCRPC actively planning green space. Planning commission reports ranging back to 1959 show concerted efforts were made in the late 1950s, early 1960s, mid-1970s, early 1980s, and the mid-to-late 1990s to acquire land, incorporate open space into the growing city, and create a network of growing green space for resident use.

Economic development planning, on the other hand, has been a primary focus of the City, but in the mostly traditional ways of making a city more competitive and attractive to prospective businesses. Tax increment financing and attempts at achieving and maintaining competitive community status are the primary avenues through which

Springfield has sought to grow its commercial tax base, with mixed results. Investing in other forms of economic development strategies is entirely viable for a city such as Springfield, given its specific assets and historical context: dealing with the cultural and physical manifestations of the manufacturing legacies of the past while preparing for an economic future headed in an entirely different trajectory.

The alternative, a green infrastructure-based economic development strategy as discussed in this report dovetails with a number of current efforts aimed specifically at increasing residential density and economic activity in downtown Springfield. Downtown Springfield, Inc. is an organization which facilitates events such as a twice-a-week farmers market, an annual Blues and barbeque festival, a taste of downtown food festival, annual holiday walks, and an annual art and wine festival.

A nearby neighborhood, Enos Park, is the focus of a city initiative to reinvigorate the central city. Efforts to increase residential density are seen in the push for renovations of existing buildings as well as the construction of a new grocery store in the northwest periphery of the downtown.

Improved bicycle and pedestrian infrastructure is also a planning priority for the SSCRPC as outlined in the Springfield Area Transportation Study's regional bicycle and pedestrian plan (SSCRPC, 2012). With a fair amount of existing urban and rural bicycle trails, a 3rd Street linear park would complement and connect this existing network well. The Sangamon Valley Trail, which runs along the western edge of the city, is an excellent example of this sort of recreational trail planning. The current 5.5-mile path

stretches from the northwest corner of the city to the southwest corner, but the Sangamon Valley Trail is planned to connect disparate communities within the county using a 38-mile right-of-way assigned over from another decommissioned rail line in the area (Landis, 2010). Ultimately this trail is planned to also connect with a State envisioned Route 66 Heritage bicycle trail that would run from Chicago through Springfield to Saint Louis.

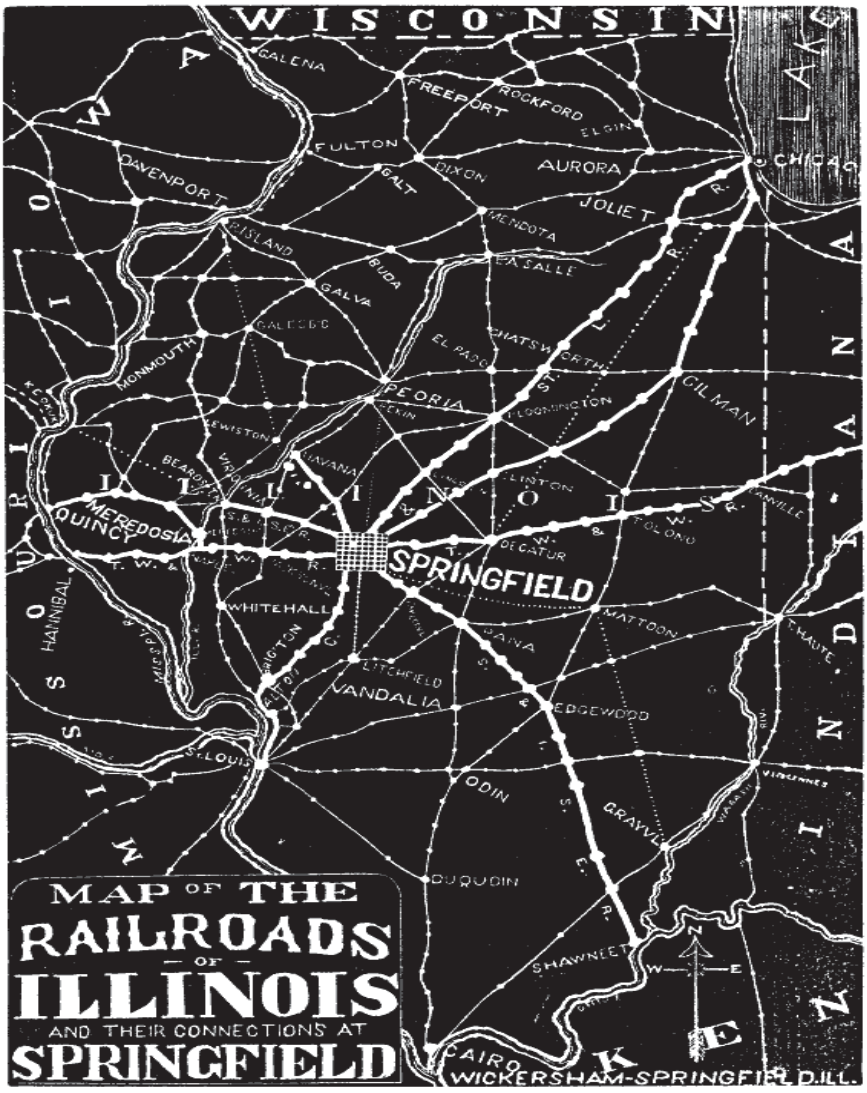
Rail History in Springfield

> Springfield is a city that grew up around its rail lines and was, at one time, an important railroad junction. Almost all of the people and goods coming into and out of the City were carried by rail. The situation at the beginning of the Twenty-first Century is vastly different. The City has significantly fewer rail lines; people arrive mostly by car; and almost all of the products sold or used in Springfield move by truck. (Hanson Engineering, "Springfield Rail Improvements Project").

The history of the railroad in Illinois began in 1835 when the fledgling General Assembly began passing laws incorporating railroad companies, bequeathing land for tracks, and mobilizing capital and resources for the continued improvements of local rail networks (Power, 1871). Illinois did not wait for the large rail companies of the East Coast to build out to Illinois; instead, rail companies were established within state boundaries before inter-state rail lines were even available to expand. The Illinois General Assembly continued to enact legislation regarding the expansion of rail lines through 1837, with the first locomotive engine being put to the tracks in 1838 roughly 60 miles east of Springfield in Meredosia, Illinois, along the Illinois River. Rail traffic itself finally made its way to Springfield in February of 1842, three years after the city was

named the capitol of Illinois. Illinois' first active rail company, Northern Cross Railroad, operated the line between Springfield and Meredosia, which then ran southwest to Saint Louis, Missouri.

Railroads of Illinois. Source: Sangamon County Historic Society.



As the mid-19th century progressed, other rail companies built additional miles of tracks and increased the frequency of trains: the Toledo, Wabash, and Western Railroad Company; the Alton and Sangamon Railroad Company; the Springfield and Pana Railroad Company; the Springfield and St. Louis Railroad Company; the Springfield and Northwestern Railroad Company; the Springfield and Mattoon Railroad Company; and the Springfield and Peoria Railroad Company (Power, 1871). In 1871, when Power was conducting his research for the Springfield Board of Trade, there were approximately 50,000 miles of railroad in the United States; Illinois claimed over 10% of that amount, somewhere around 6,000 miles by the end of the 1860s, pictured in the Illinois rail illustration on the preceding page (Power, 1871).

Given the extensive history of rail in Springfield, it may come as no surprise that rail consolidation has been a topic of conversation within the city for nearly 90 years. The 1925 comprehensive plan of the City of Springfield discussed consolidation of the rail corridors already within the city (West, 1925). Planners at the time recognized that though rail development had greatly influenced the development of the city itself, there was a need to consolidate rail traffic through the city to "bring about a convenience for city dwellers, a saving in expense to shippers, a greater protection to human life, a saving in operation costs to the railroad, and a more attractive and desirable city in which to live" (West, 1925, p. 47). The proposal at the time consisted of moving most of the traffic to the east side out town, out of downtown, even calling for some of the consolidated tracks to be elevated (West, 1925, p. 63).

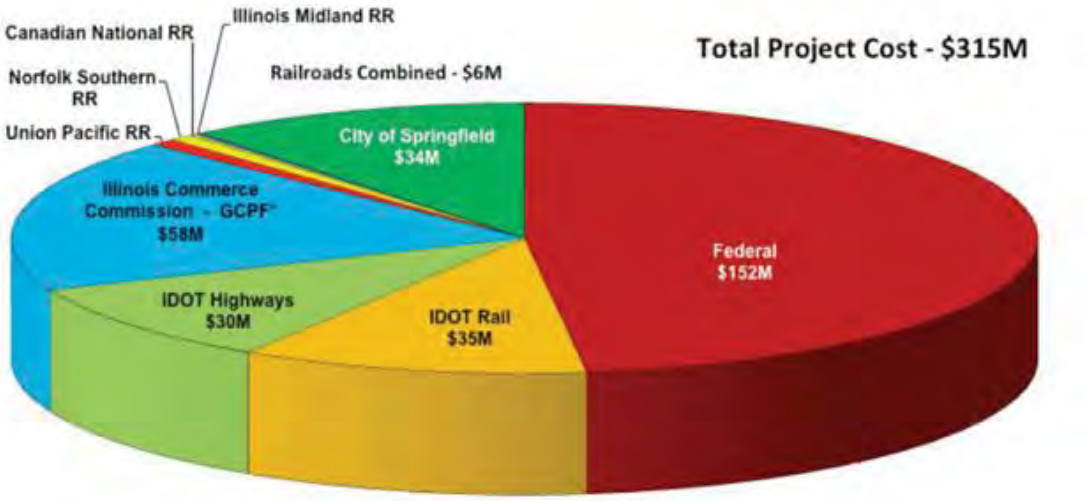
Similarly, beginning in 1968 through the early 1980's, studies were conducted to assess the necessity of three separate rail corridors in Springfield. State legislation created the Capital City Railroad Relocation Authority (CCRRA) that repeatedly demonstrated the need to consolidate rail traffic in order to accommodate a decrease in passenger rail traffic, an increase in automobile use, and to attempt to redevelop the downtown and surrounding residential areas (pp. 1-1–1-2).

Current Plans for the Rail Corridor

Over time, the dozens of rail companies spread across the state either consolidated or were bought out by other organizations. Today only four major railroad companies operate on the lines going through Springfield: Union Pacific Railroad, Norfolk Southern Railroad, Canadian National Railroad, and Illinois Midland Railroad. Of these four, rail lines owned by Union Pacific RR (the 3rd Street Corridor) and Norfolk Southern RR (the 10th Street Corridor) are the primary targets affected by the future plans for rail corridor consolidation.

Union Pacific currently owns the 3rd Street corridor but has agreed to consolidate uses with Norfolk Southern and send their traffic along the expanded 10th Street corridor once construction is completed. When all train traffic – including both freight and passenger – has been migrated to the 10th Street corridor, the 3rd Street corridor will be completely decommissioned. It is this event that provides the city with such a unique opportunity.

The plans for the rail corridor consolidation are extensive, involving a multi-phased project plan with funding originating from multiple sources. A local engineering firm, Hanson Professional Services, Inc. was tapped to lead the project, though many different firms and agencies will play a part in the conceptualization and execution of the consolidation project. The current projected cost of the consolidation project is approximately $315 million, with a majority of the funding still to be pursued, although the Illinois Department of Transportation has funded the planning and design phase of the project already. Funding strategies for the land acquisition and construction phases are still being organized (Hanson, 2013, "Springfield Rail Improvements Project").



Estimated Rail Consolidation Funding Sources. Source: Hanson Professional Services.

According to Hanson Professional Services' website "Springfield Rail Improvements Project,"[1] the consolidation project consists of the following steps.[2] Design and funding acquisitions are ongoing from 2013 to mid-2015. During this same period, additional funding and land acquisition of parcels abutting the current 10th Street corridor will be facilitated from early 2014 to the end of 2016. Construction is slated to begin in mid-2014 and continue through 2020. While expansion construction is being completed on the 10th Street corridor, high-speed tracks will be installed along the 3rd Street corridor. Once construction of all necessary infrastructure expansions, such as potential flyovers, road closures, and at-grade crossing, is completed, high-speed tracks will be laid along 10th Street. A quiet zone will also be created from Sangamon Avenue to Stanford Avenue along the 10th Street corridor to reduce noise pollution, especially in areas which receive overnight traffic. As the 10th Street construction is completed, 3rd Street will be completely decommissioned, with the previously installed high-speed tracks being removed, most likely in 2020.

At that point, the City of Springfield is expected to take control of the decommissioned 3rd Street corridor and could potentially begin construction of any post-decommissioning projects. The City has expressed an interest in turning the decommissioned 3rd Street corridor into a pedestrian and cyclist urban trail (Ferry Architects, "Springfield Railroad Corridor Analysis"). These plans however, do not

[1] Hanson Professional Services, Inc. (2013). "Springfield Rail Improvements Project." Available at: http://springfieldrailroad.com/newsite/index.php?option=com_content&view=article&id=30&Itemid=185.
[2] Assuming all funding for that particular phase of the project is readily available.

extend past paving a bicycle and pedestrian path the length of the corridor. As this stretch of land spans more than approximately 4.75 miles from Sangamon Avenue on the north side of Springfield to Stanford Avenue to the south, the City has an opportunity to provide a city-wide recreational amenity if a more thorough design commitment is made by the City. Given the considerable amount of cultural attractions and economic destinations in downtown Springfield, redeveloping the decommissioned corridor into something more than strictly an urban trail is an alternative that the City should consider as an alternate economic development strategy focusing on quality of life and amenity improvements.

A Note on the Social and Political Reception of the Consolidation Project

The issue of high-speed rail going through the heart of the city has been highly contentious. Initial plans from the Illinois Department of Transportation called for the 3rd Street corridor to be the recipient of these consolidation efforts, effectively the opposite of the current plans as approved. Concerned citizens, various neighborhood associations, and some City Council members believed that expanding 10th Street over 3rd Street would further segregate the east side of Springfield from downtown and the west side of Springfield.

Supporters of the plan to consolidate rail on the 10th Street corridor conducted a significant amount of campaigning, not only in City Council but across the city and through many of the neighborhoods as well, in order to educate the public on the traffic and economic impacts of developing high-speed rail along the 3rd Street corridor versus

the 10th Street corridor. The SSCRPC conducted a traffic impact analysis (2009) using TransCAD on the effects of increasing trains through the city and given the location of 3rd Street, the results unsurprisingly indicated that congestion would significantly increase in the downtown area. With traffic congestion caused by train traffic already an issue in the city, coupled with the risk of damaging the downtown economy and nearby neighborhoods, support for track consolidation along the 10th Street corridor grew substantially.

Support was additionally increased by the opportunity the 10th Street consolidation provided to develop a multi-modal transportation hub – which would bring together public transit, passenger rail, intercity buses, and tourist buses – along the route in the downtown. The SSCRPC conducted research into the possibility such a center might provide as a tool for Transit-Oriented Development (TOD) in the area, and ultimately developed an illustrative plan and design for such development within a quarter mile of the location selected for the center. Given that the two rail corridors are only seven blocks apart, passengers using the multi-modal center located on 10th Street corridor could easily make use of a linear park developed along the 3rd Street one (SSCRPC, 2011).

Limitations and Opportunities of the Site

Due to the nature of an urban rail corridor, there are a number of opportunities and challenges posed by such a site. The success of such a redevelopment project revolves around mitigating such limitations while capitalizing on the opportunities. Both

rail corridors essentially function as boundaries for downtown Springfield. The 3rd Street corridor is located approximately three miles from US Route 4, which serves as a functional landmark-boundary to the west. The 10th Street corridor on the other hand, is a little over two miles from Interstate 72, which functions as landmark-boundary for the east side of the city.

Site Limitations

Given the central location of both the 3rd Street and 10th Street corridors within the central core of Springfield, there is little open space to speak of bordering either. Residential and commercial properties are typically abutting the rail line easement from the northern to southern edges of both. Given this situation, the 3rd Street corridor in particular is rather narrow in many places, especially in the downtown Springfield area. On the other hand, once the more peripheral 10th Street corridor is expanded with high-speed tracks to accommodate multiple rail lines, a number of acquired parcels will generate small, "orphaned" parcels along the entire corridor. While the total acreage of these orphaned parcels may be fairly significant, their disparate nature could present certain difficulties.

Site Opportunities

While the central location of both rail corridors can be considered a limitation in many ways, this also presents the City with an opportunity to increase connectivity and create a miniature greenbelt of sorts along the 3rd Street corridor, and a network of pocket parks along 10th Street. Because of the length of both corridors, they also lend themselves

to becoming truly citywide assets and not just downtown assets, since they would be accessible from multiple areas of the city. As a linear park, the 3rd Street corridor would effectively connect urban and interurban trails to the north and south of the city. Areas east of 10th Street would also benefit greatly from a network of pocket parks or community gardens not only as a means of utilizing green space, but also by providing a source of fresh produce source that is neither a retail nor private property venture.

Broadly speaking, downtown Springfield has limited publicly owned green space as compared to other areas of the city. With a chain of green spaces to the west (10th Street) and a continuous linear park to the east (3rd Street), visitors and residents would be more likely to view the interstitial space as an additional amenity and not just seven block which needs to be traversed in order to access aother point. Ideally, this would lead to increased pedestrian and cyclist traffic downtown, which in turn would strengthen ongoing economic development efforts in the area. By making the area more inviting, visits to downtown are likely to not only increase in frequency and overall number, but also in duration. The project proposed in this professional report, however, would provide a wonderful amount of connectivity in terms of bicycle and pedestrian infrastructure linking opposite ends of the city together and pulling recreational and economic traffic to downtown in a more proactive fashion.

In the following chapter, the built and programmatic context of downtown Springfield is described as a means of identifying the most effective ways a linear park

redevelopment might be designed in order to increase its draw to the central core of the city.

Chapter Three: Focusing on the Downtown area of the Rail Corridor Redevelopment Project

This development proposal focuses primarily on the area within and immediately surrounding downtown Springfield, defined as the area between Carpenter Street to the north, 11th Street to the east, Lawrence Avenue to the south, and Lewis Street to the west. When discussing the addition of a major pedestrian and cyclist corridor in the downtown area, it is necessary to thoroughly describe the area itself with respect to local history, the main actors, and the existing commercial, cultural, and service amenities. Linking downtown with the rest of the city and adding to a visitor's experience of downtown has the potential to increase activity in the area while providing the city as a whole with a top-of-the-line amenity.

Local Downtown History and the Importance of Being Abraham

As previously stated, Springfield, Illinois is most famously known as the longtime home of President Abraham Lincoln during his years prior to becoming a Congressman in the United States House of Representatives in 1846, and in between his Congressional years and the beginning of his Presidency after the 1860 election. During his time in the city, Lincoln left a profound mark on the city's downtown and by proxy, its current economy.

Lincoln's tenure in the area means that Springfield – including some nearby sites – boasts a large amount of historical sites related to the president, including his family's original farmstead, the general store he owned, his adult home, his original law offices,

the Old State Capitol where he was a State representative, his tomb, as well as the presidential library and museum dedicated in 2005. Of these sites of particular historical interest, his adult home, law offices, the Old State Capitol, and the Abraham Lincoln Presidential Library and Museum (ALPLM) are all located in downtown Springfield. This provides Springfield with a significant number of historic sites, which can serve as a means to boost economic activity in the downtown area. For instance, the ALPLM alone attracted more than 3,000,000 visitors to downtown Springfield from its opening in 2005 to August 2012 (Petrella, 2012).

Another exciting potential addition to the inventory of historic attractions in downtown is a recreation of the railcar that bore Lincoln back to Springfield for his funerary services after his assassination in 1865 (The Historic Railroad Equipment Association, 2014). This addition could function as an additional means of increasing historic tourism to downtown. There are two logical choices for its placement in the area, if donated to the City. One of these is in front of the historic depot where Lincoln bid his farewell to his neighbors and colleagues prior to entering the White House, located on the 10th Street corridor. Given that this corridor will be expanded and regularly used in the near future due to the rail consolidation project, this particular location is unlikely to be a permanent site for the railcar. The other viable option is, of course, the site of the current Amtrak passenger station on the 3rd Street corridor located less than a five-minute walk from the Presidential Library and Museum. Once decommissioned, the current Amtrak

structure on the site could serve as a multi-purpose, multi-organizational space and also as a place to house the donated rail car.

In addition, there are other historic sites in downtown Springfield of interest to visitors, including the Dana Thomas House designed by Frank Lloyd Wright in 1902; the Vachel Lindsay Home, where the famous local poet lived; and the Elijah Iles House, the oldest residential home still in existence in the city. Between these sites and the magnetic draw of those related to President Lincoln, the redevelopment 3rd Street corridor has the opportunity to help brand and create an exceptionally high-quality historic tourism network within the heart of the city.

Picturing the Area: Current Amenities in Downtown

One of the greatest strengths downtown Springfield currently possesses is its function as a large center for employment. In addition to the Illinois State Capitol building, numerous other federal, state, county, and city buildings are located in the area. This results in a very high density of persons making trips to downtown every weekday. Anchoring the northeast and northwest corners of downtown are the area's two major medical centers: Memorial Medical Center and Saint John's Hospital. Both are located in the state designated Mid-Illinois Medical District, one of three such districts in the state. This creates additional trips to the area of not only medical personnel but patients and patient visitors as well.

As the historic center of Springfield – its first residence being a cabin built near the current intersection of 2nd and Jefferson Streets – downtown has always been a focal

point of the city and Sangamon County. With the State legislature and Governor's Official Residence located within its boundaries, the atmosphere of downtown Springfield is noticeably charged with political energy during legislative sessions. Illinois' Chamber of Commerce and Springfield's Chamber of Commerce are also located near downtown, acting as a locus for economic development decisions for the city, along with Springfield's OPED and the regional SSCRPC.

Many of the amenities in downtown reflect the large amount of office and medical employees in addition to tourists and local visitors to downtown. In the area defined as Downtown Springfield, there are over 30 restaurants and cafes, many of which cater to the working crowd and close after lunchtime. Similarly, a large number of bars and music venues can be found downtown, creating a major draw for the area in the evenings and on the weekends. A variety of conferences, business and industry events are held downtown either at the Hilton Hotel, the President Abraham Lincoln Hotel, or the Prairie Capital Convention Center (PCCC).

Downtown also claims many of Springfield's cultural attractions. Aside from the historic sites already mentioned, there are a number of arts and cultural institutions including the Hoogland Center for the Performing Arts, the Legacy Theater, the Illinois State Museum, and the future home of the Springfield Children's Museum. Musical and theatrical performances touring the country also regularly stop at the PCCC annually. Finally, the largest branch of the local library, Lincoln Library, can also be found in the

middle of downtown, housing over 300,000 reference materials, fiction, and nonfiction volumes (Lincoln Library, 2013, "About Lincoln Library").

Aside from the state capitol building, a number of other federal, state, and local agencies are located in the area, offering a wide range of services. The local office of the US District Court, The Illinois Supreme Court, Illinois Appellate Court, and State Archives can all be found clustered within the downtown. The headquarters for the local police and fire departments are located on the east side of downtown as part of the city's Municipal Complex, very near the County Complex, which houses the local trial courts, and the offices of a number of county elected officials, such as the County Board, Assessor, Recorder of Deeds, among others.

Current Conditions: Downtown and the Corridor

Although there are a number of Lincoln-era structures still located there, and the area immediately surround the Old State Capitol was designated a federal historic district, much of current downtown Springfield was built in the early to mid-20th century evidenced by the large number of two- to three-story brick facades within the center of downtown. Some historic churches from the late 19th-century also remain mixed in with newer construction.

Finished in 2011, Capitol Avenue, which runs east to west through the downtown, was given an urban design makeover by Hanson Professional Services, focusing on integrating a wide promenade with a capitol-viewing corridor by eliminating parking, adding curb extensions for pedestrian ease-of-use, creating Springfield's first roundabout

at Capitol Avenue and 12th Street, as well as more design-oriented touches such as improved landscaping, and stone markers with engraved quotes by famous Illinoisans (Hanson Professional Services, 2011).

In 2002, a committee including architects, urban designers, and planners submitted a study about the conditions of the downtown area. A series of goals were laid out by the follow-up committee to the study, including the following: to develop a downtown plan, to create a capitol campus area surround the current state capitol, to improve and develop a network of connected areas, to encourage historic preservation in the area, and finally, to improve transportation and parking options (American Institute of Architects, 2002). Beautification projects have been completed in the area following the acceptance of the study and work of the follow-up committee, including the previously mentioned re-design of Capitol Avenue.

Downtown Springfield also happens to be very walkable within its own boundaries. All streets within the area have sidewalks and the block lengths are relatively short. In addition, the City has begun installing curb extensions, or bump outs, at many intersections to aid pedestrians by shortening the amount of time spent in the street itself. Aside from the Capitol Avenue improvements project, the square surrounding the Old State Capitol has also received a makeover in recent years, especially the pedestrian-only portion of Adams Street between 5th and 6th Streets.

Given the plans to consolidate the 3rd Street and 10th Street corridors into an expanded 10th Street, and as noted previously, suggestions have also been made to create

a multi-modal mixed-use transportation center between 9th and 11th Streets to the west and east, and Washington and Adams Streets to the north and south. This could potentially house a transit hub for not only Amtrak passenger rail, but also the Springfield Mass Transit District. Since plans for consolidation have been approved, the manifestation of this multi-modal center will also have an effect on the built environment of downtown.

Unfortunately, downtown Springfield does not currently have much in terms of cycling infrastructure. Currently, there are no dedicated bicycle lanes, shared lanes, paths, or trails that go through downtown for cyclists. In the SATS Bicycle and Pedestrian Plan from August of 2012, however, proposed lanes have been suggested for 7th Street, which bisects the area, as well as 2nd Street to the west, Carpenter Street to the north, 11th Street to the east, and a bicycle route along Capital Avenue to the south.

Based on a visual analysis of the streetscape immediately abutting the 3rd Street Corridor one block to the east and west from Madison Street in the North to Cook Street in the south, the overwhelming majority of the streets, sidewalks, and buildings themselves are in relatively good repair. There are some vacancies among the buildings in the analysis area, but growth in downtown overall seems to bode well for those units being occupied at some point in the near future.

Next, this professional report will look into the most effective means of designing the linear park so as to not only support the outright redevelopment costs of this proposal,

but to also more appropriately integrate the park into the existing built environment of the city.

Current Amenities in Downtown Springfield

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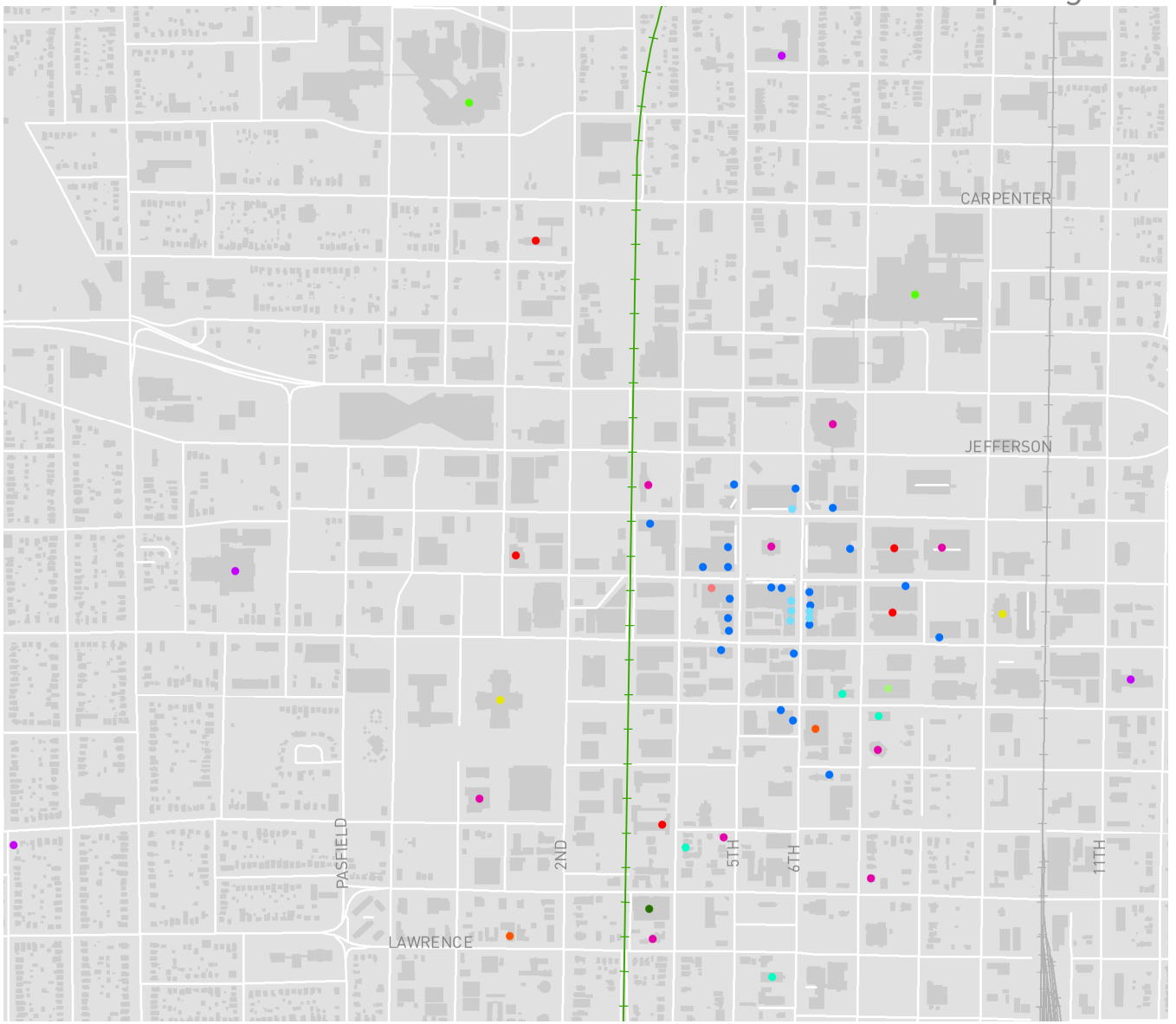
Amenity Type

- Accommodation
- Arts
- Civic
- Hospital
- Library
- Recreation
- Religous Center
- Restaurant/Bar
- Retail
- School
- Tourist Attraction
- Youth
- 3rd Street Corridor
- Rail Line
- Street
- Building Footprint

0 0.1 0.2 Miles



Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

Chapter Four: Considering Effective Corridor Design

The failure or success of a project is intrinsically tied to the quality and thoughtfulness of its design. If the goal is to develop a park as an amenity that increases quality of life and strengthens economic activity, the park design must suit its immediate environment and its purpose. In the case of Springfield, careful consideration of the area's past and present is required to maximize the opportunity presented by the 3rd Street corridor's redevelopment. As already mentioned, the City of Springfield has stated its intention to pave an urban trail along the decommissioned corridor for cyclist and pedestrian use. However, given the success of similar projects in other cities, this is a prime opportunity for Springfield to expand its vision for the corridor and instead develop a world-class amenity as a means of providing green infrastructure services while bolstering economic activity.

Considering the Local Context

Springfield already has a history of successful park development. In 2010, the city saw the opening of a widely acclaimed park on the southern end of Springfield called Southwind Park. This 80-acre park sports a multitude of amenities including a great lawn, fishing lake, over 1,000 new trees, constructed wetlands, stormwater management bioswales, picnic shelters, various benches and seating spaces, engaging playscapes, a 2.5-mile urban trail, sensory gardens, a butterfly garden, a bocce ball court, horseshoe pits, shuffle board courts, a gazebo, multiple three-tiered drinking fountains for adults, children, and pets, and a splash pad (SPF Edwin Watts Southwind Park Project, 2014).

This park has proven itself to be widely popular with the community. Based on site visits randomly from July 2012 to March 2014, I have yet to travel past this area without seeing some sort of activity taking place within the park regardless of the season. The building facilities on-site are also at the cutting edge of sustainable and green technologies, including Erin's Pavilion (below), a LEED-Platinum certified event space that uses solar, wind, and geothermal energy.

Erin's Pavilion. Source: SpringfieldParks.org, John Muchow Photography.

Southwind Park is estimated to have cost $16 million to build, $4.3 million of that reportedly spent on Erin's Pavilion itself. Of that amount, over half was committed by the Springfield Parks District, $2.5 million from grants, $1.2 million from donations, and over $3 million in the form of donated professional and volunteer services (Reynolds, 2010) (at the time of this article, the remaining $1.2 million was still in the process of

being sourced from additional grants, donations, and volunteer sources). Compared to the costs of building linear parks such as the High Line at over an estimated $140 million (Pogrebin, 2009; Hogarty, 2012) or The 606 at an estimated $91 million (The Trust for Public Land, 2013), Southwind Park is an 80-acre example of effective park design accessible to many municipalities, especially if creative funding strategies are used. To create a redesigned public space along 3rd Street to not only draw visitors but also to invite local residents, it is necessary to consider how some of the specific successes of Southwind Park could be translated into amenities along the proposed linear park corridor.

Thinking Critically About Design: Appropriate Amenities

Downtown Springfield itself has an interesting population makeup. For the purposes of the proposal, "population" is used to refer not only to the people residing in the area but also the people who commute to and stay downtown during the workweek in particular. As described in Chapter Three, the density of workers is much higher than that of actual residents. Also, the city and other organizations have been actively trying to increase residential density within the area in addition to expanding economic activity. Considering these facts, the major amenities offered by a proposed linear park should reflect the needs of the current worker densities in the area but also cater to the current and proposed residential densities as well.

Taking these populations into consideration, park designers must decide which amenities would be most practical for the project. Since the area has a high density of

working persons during the majority of the week, the availability of accessible and comfortable seating is important. Workers could easily use the linear park as a place to visit with friends and colleagues, eat a meal, or pass their break or lunch time. Including tables for eating, benches for chatting or reading, and other seating options would provide a valuable asset to this population. Given that the largest farmer's market in the city is held along Adams Street from 2nd Street to 5th Street on Wednesday and Saturday mornings, public seating of this nature would give visitors a pleasant place to enjoy their purchases as well.

Similarly, workers, residents, and visitors alike would benefit from the use of drinking fountains. The typology of the three-tiered drinking fountain found in Southwind Park is a great example of incorporating all sorts of users into such a common but appreciated amenity. Workers on breaks, tourists strolling around the area, and recreational users walking, jogging, or cycling along the trail are all very likely users of such a convenience-type amenity.

Designing for children is another integral method of creating spaces that would be widely used by local residents and visitors alike. Including areas designated for playscapes such as playground or splash parks for students at nearby schools or for the children of adults visiting the area is a way to make the park itself a destination and not just an after thought for users. By incorporating the needs of children into the design of the park, parents are more likely to choose visiting this park over another because of the availability of playscapes that are engaging for their children.

Finally, the importance of tourism should not be discounted in the design of the 3rd Street linear park. As discussed in the previous chapter, downtown Springfield has a diverse and surprisingly robust coterie of amenities to incorporate into the design process, which will help maximize the cost efficiency of the park in order to make it a viable use of local funds. Since so many historic sites, popular shops and restaurants, and public buildings are located so closely together, wayfinding markers should be developed to direct visitors to different attractions. This will allow the city to emphasis certain corridors downtown, not only for their worth as journeys to a destination but as destinations in their own right.

As an example of this necessarily thoughtful process, a GIS suitability analysis was conducted in order to identify appropriate locations for the proposed amenities listed above: public seating, drinking fountains, playscapes, and wayfinding markers. Following this section is a series of maps highlighting suitable locations for each amenity based on the following distance criteria: i.e. each map was developed based on assumptions of best location based on proximity to certain, existing built environment features and population densities.

Public Seating

The map illustrating suitable sites for public seating along the 3rd Street corridor is based on a suitability analysis involving the following factors, equally weighted. For example, the closer to a cluster of workers, the more suitable a location is to have public seating.

- Distance from worker density

- Distance from existing amenities
- Distance from the intersections of the sidewalk and corridor

Public Drinking Fountains

The map displaying appropriate locations for public drinking fountains reflects the following inputs, equally weighted:

- Distance from worker density
- Distance from intersections of the sidewalk and corridor
- Distance from existing amenities

Playscapes

The suitability analysis for playscapes included the following factors, equally weighted:

- Distance from children-attracting amenities
- Distance from intersections of the sidewalk and corridor
- Distance from major traffic intersections with the corridor

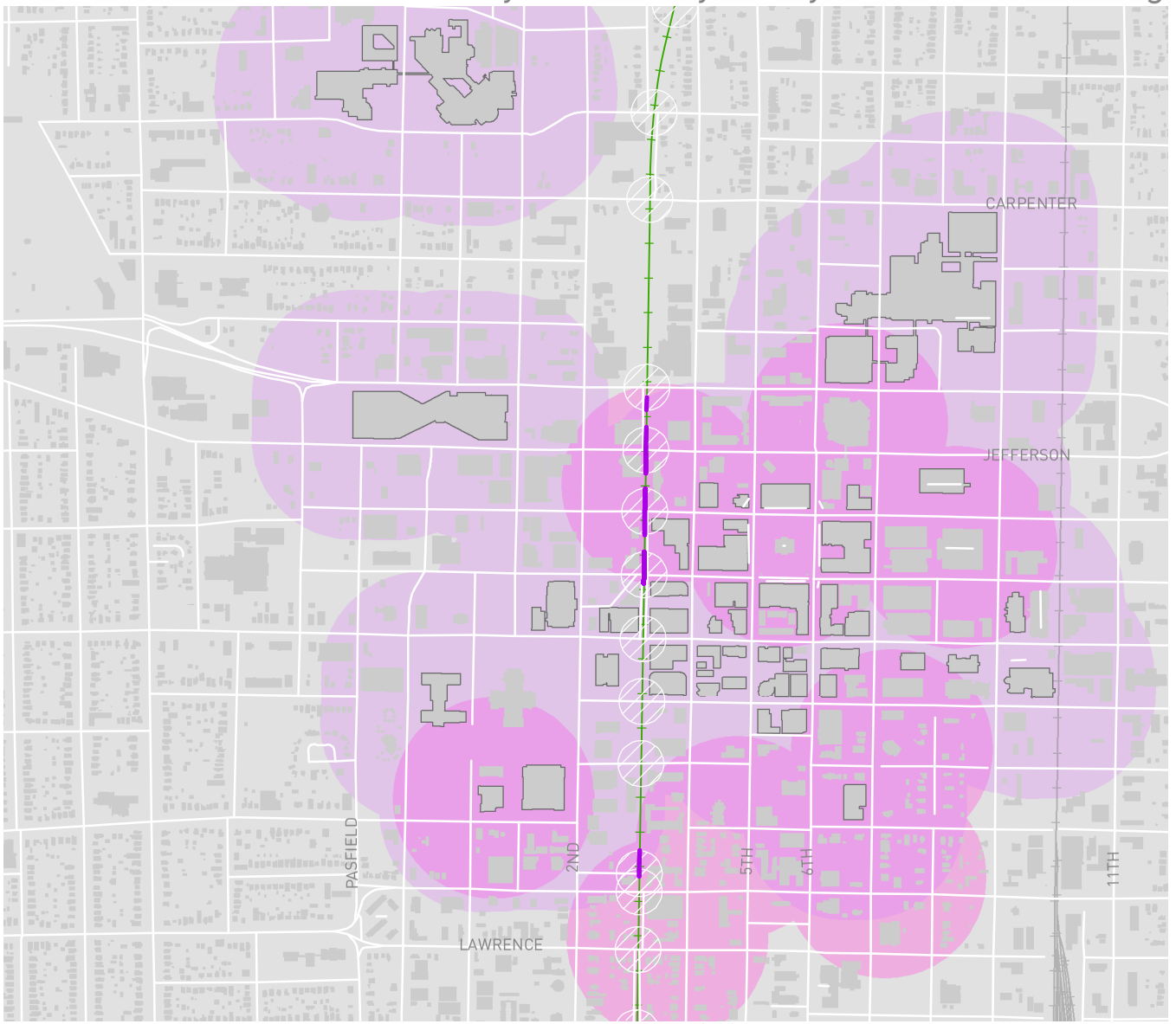
Wayfinding Markers

Wayfinding markers were examined using a suitability analysis considering the following, equally-weighted factors:

- Distance from tourist-attracting amenities
- Distance from intersections of the sidewalk and corridor
- Distance from major traffic intersections with the corridor

Amenity Suitability Analysis: Public Seating

Green Infrastructure as an Economic Development Tool: Linear Park Amenity Development in Springfield, Illinois



77

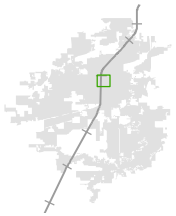
- Suitable Seating Area
- 3rd Street Corridor
- Rail Line
- Street
- Employment Center*
- Building Footprint
- Sidewalk Intersection Buffer
- Existing Amenity Buffer
- Worker Density Buffer

*: Notable place of employment based on local knowledge.

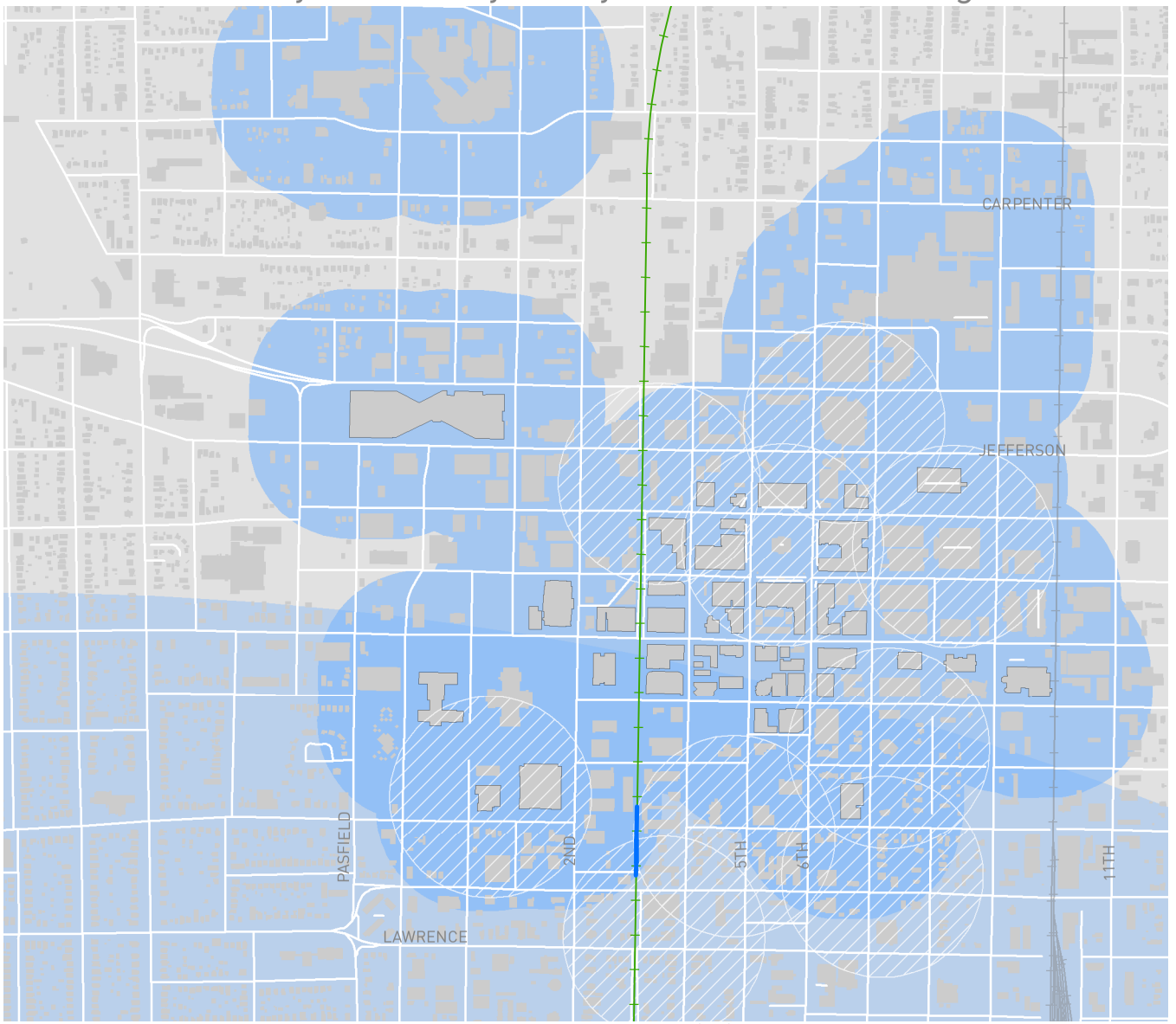
0 0.1 0.2 Miles

Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

Amenity Suitability Analysis: Public Drinking Fountains



Green Infrastructure as an Economic Development Tool: Linear Park Amenity Development in Springfield, Illinois



78

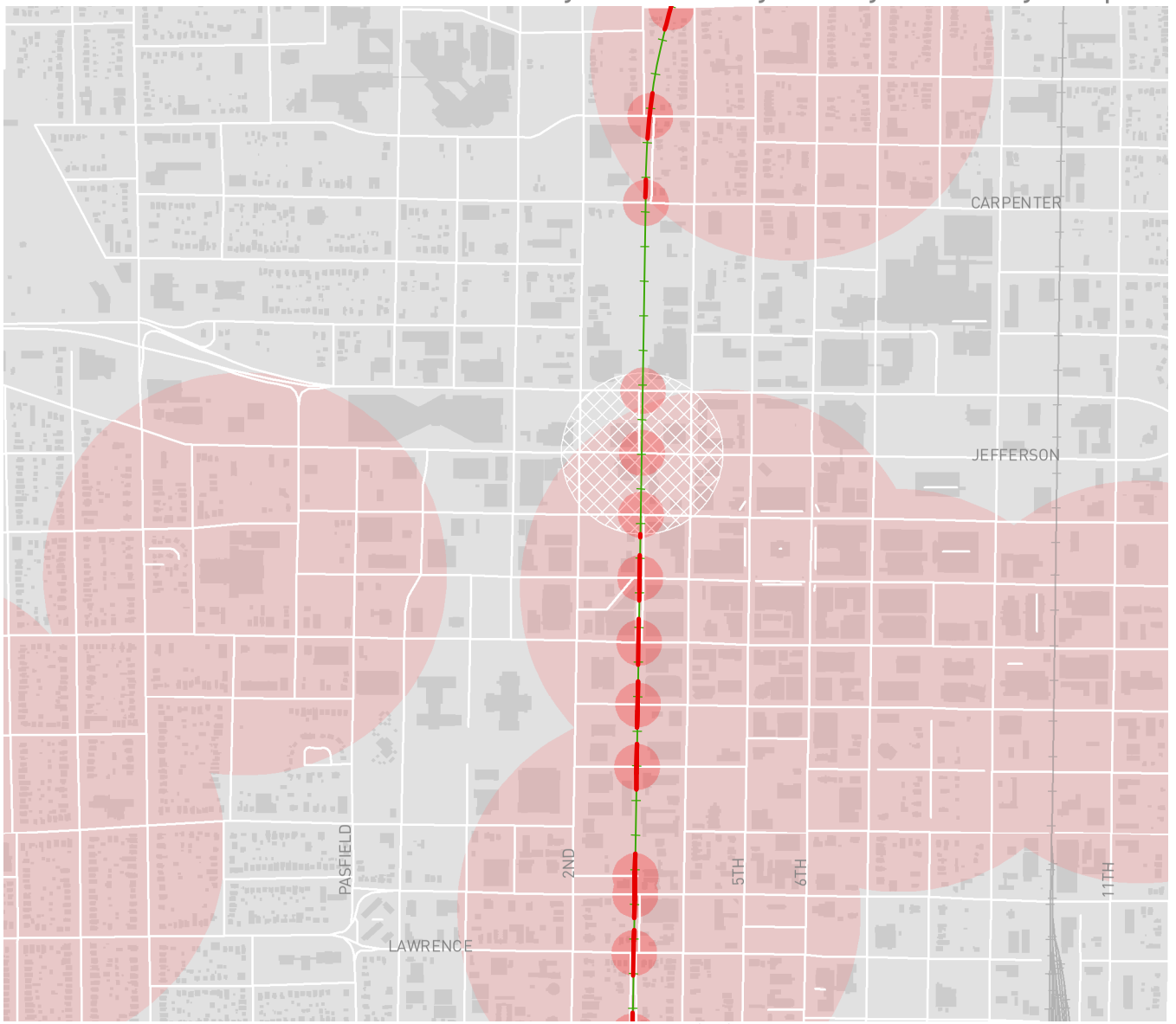
- Suitable Fountain Area
- 3rd Street Corridor
- Rail Line
- Street
- Emplomen Center*
- Existing Amenity Buffer
- Building Footprint
- Worker Density Buffer
- Recreational Trail Buffer

*: Notable place of employment based on local knowledge.

0 0.1 0.2 Miles

Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

Amenity Suitability Analysis: Playscapes

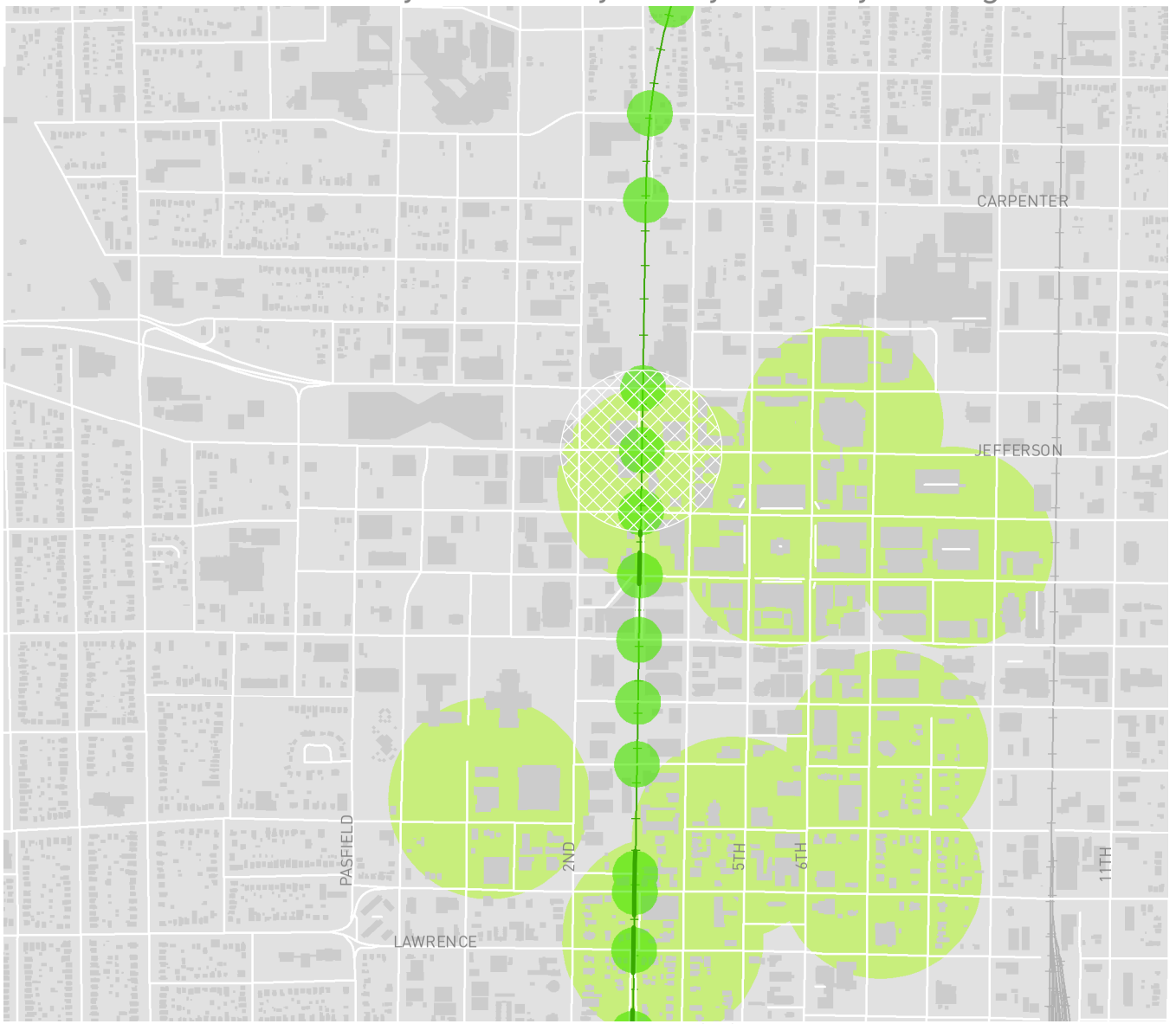


Suitable Playscape Area
3rd Street Corridor
Rail Line
Street
Building Footprint
Major Intersection Buffer
Sidewalk Intersection Buffer
Youth Attraction Buffer

0 0.1 0.2 Miles

Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

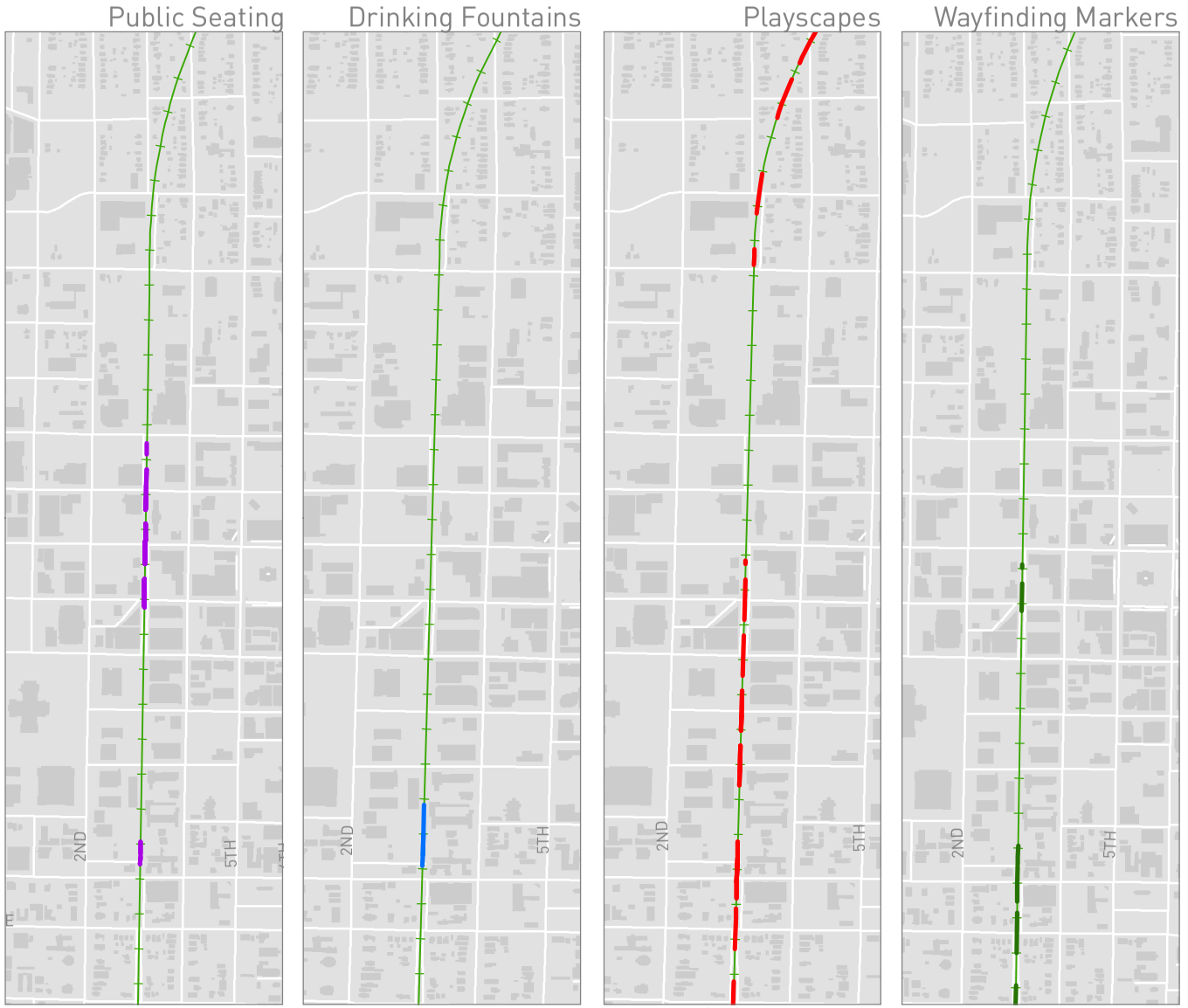
Amenity Suitability Analysis: Wayfinding Markers



Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

Green Infrastructure as an Economic Development Tool: Linear Park Amenity Development in Springfield, Illinois

Proposed Development Areas By Amenity



Jess Weitzel, December 2013. Sources: Springfield-Sangamon County Regional Planning Commission, US Census Bureau. NAD 1983 StatePlane Illinois West FIPS 1202 (Feet).

While these analyses are not intended to provide precise recommendations for amenity construction, the results suggests that based on very common sense criteria, certain locations are in fact more suitable than other for specific amenities. If local jurisdictions are to commit funds or commit the resources to find external funding sources, it is essential that the City to receive a solid return on its investment. For example, a playground placed too close to a busy intersection may be perceived as too dangerous, whereas a playscape located in a low traffic area is likelier to be used and therefore justify the expense of building it in the first place.

Other Critical Design Considerations

There are additional considerations that must be made pertaining to the design of the linear park. Principally among these is that design and implementation be as cost-effective as possible, and that user safety is taken into account.

The choice of landscaping plantings and materials can have a great impact on the effectiveness and cost-efficiency of park design. It is common knowledge that using native species of plants assists in improving soil quality and stormwater management since they are adapted to the local environment. According to the Environmental Protective Agency: Great Lakes page, “native plants do not need fertilizers, herbicides, pesticides or watering, thus benefiting the environment and reducing maintenance costs (“Greenacres: Landscaping with Native Plants,” 2012).” Aside from their aesthetic beauty, the use of native landscaping can effectively lower costs of such a project over the long term.

Safety, of course, is another primary concern for ground-level rails-to-trails projects. Southwind Park provides an excellent example of including safety features and designs in compliance with the Americans with Disabilities Act. Incorporating raised crosswalks and other grade-appropriate design of intersections will prevent costly rehabilitations later while increasing cyclist and pedestrian safety. Downtown Springfield is set up in a grid pattern with relatively short block lengths rendering the area very walkable, but this also means that the linear park would frequently interact with vehicle traffic. Innovative uses of pedestrian crossing signals would increase the likelihood of users feeling safe and therefore using the park.

Creating a Network: Connectivity of Current and Proposed Amenities

One of the greatest strengths of the location of the rail corridor is its proximity to many existing attractions in downtown. Not unlike the Cultural Trail in Indianapolis, this project could function as a sort of "discovery" corridor for downtown, aimed at visitors and residents alike. Implementing amenities within the park itself that create linkages with the existing amenities in the area will only serve as a means to increase traffic and add to the existing vibrancy of downtown.

This project also provides an opportunity to engage local vacant properties in new ways. The Illinois Department of Commerce and Economic Opportunity (DCEO), under its small business assistance mandate, manages various innovation incubators, workspaces, and tech hubs across the state, though none are located within the capital city (DCEO, 2014). Locating such an incubator near the proposed linear park, particularly in

the area of the Mid-Illinois Medical District, which includes the aforementioned hospitals as well as several clinics and the Southern Illinois University School of Medicine, would offer additional benefit to its tenants by placing those start-up entrepreneurs near existing businesses and legislative offices.

Vacant buildings and storefronts along the 3rd Street Corridor provide interesting design potentials but also opportunities for economic development. The potential for corridor-fronting businesses aimed at recreational and commuter users is one of those, as evidenced by popular businesses fronting bicycle paths such as the Pittsburgh iteration of the Germany beer hall, the Hofbrauhaus along the Great Allegheny Passage (Pruetz, 2013). As café and microbrewery cultures continue to gain popularity in the United States at large and gain traction in Springfield itself, this presents an opportunity to support local start-up businesses based on their proximity to a 3rd Street linear park.

Given all of the possibilities that the redeveloped rail corridor opens up to the city, the issue of effective implementation becomes incredibly important. The final chapter of this professional report examines potential funding sources and implementation strategies that Springfield could pursue in order to bring a linear park along the 3rd Street corridor to life.

Chapter Five: Funding and Implementation Strategies

Funding is arguably one of the most critical parts of any redevelopment project. Under the assumption that all involved parties are committed to following through with the project as designed, the primary concerns turn to the following: how to find creative ways to fund the project to decrease the burden on the local community, and how to establish productive partnerships to ensure that the project not only gets off the ground, but also can be maintained in the future.

Strategies

For a quality of life project such as this, a strategic approach is necessary in order to fund and implement the project at the most efficient cost. This includes being creative with funding and implementation strategies. There are a number of ways a city could approach funding and designing a project such as this. The points to be addressed here include the importance of phasing the project and considering tapping into alternative resources, especially for the design portion of the project.

The first of these is the idea of phasing the project appropriately. More often than not, it is more realistic to assume that a city will receive funds over time, not necessarily at the outset and in one lump sum. By deciding to phase the project, the park could become a functioning amenity more quickly, generating more trips to downtown as soon as is possible. The engineering project associated with the rail consolidation plan is similarly phased to accommodate the fluctuating availability of funding sources while allowing the project to continue along its own timeline.

Unsurprisingly, most cities use requests for proposals (RFPS) in order to complete municipal projects, which are almost always answered by professional design or engineering firms. However, by creating a design competition aimed at emerging design and engineering talent – specifically in the form of students or new professionals – the City could provide an excellent opportunity for students to work on a real-world project while at the same time lowering the design costs of the project. As an example, the Urban Land Institute hosts an annual design competition for multi-disciplinary teams of students who design a redevelopment project for a large-scale site (Urban Land Institute, 2014). Three semi-finalists are chosen from submissions; the first place team receives $50,000 and the other two teams receive $10,000 each. Considering that the generally accepted standard design fee is around 10 percent of a multi-million dollar project, the design competition prize is a distinct savings in terms of financing design costs.

In Illinois alone, there are eight accredited architecture programs (Education News, 2013), two accredited landscape architecture programs, and 43 accredited engineering programs (Education News, 2013). This provides a large pool of talent just within the state, in addition to the number of accredited programs nationally. Not only would such a design competition be a means of leveraging emerging talent and lowering design costs, but also a way to generate excitement about the project, making it known outside of just the regional area and creating a lot of valuable publicity.

Potential Funding Sources

A number or local, state, federal, and private funding sources can be explored in order to finance this redevelopment proposal.

Local

Two of the most common means of financing local improvement projects are, of course, the tax increment finance (TIF) tool and bonding measures, some of which require local elections. Given that Springfield already has eight TIF districts (City of Springfield, 2013), it may not be the best strategy to implement another TIF district, especially being so close to the soon-to-expire designated Central Area (downtown). Similarly, attempting to raise funds based on a bonding measure may lead to additional issues. Given the local controversy surrounding the rail consolidation itself, attempting to convince voters to approve a referendum for park development along the decommissioned 3rd Street corridor may prove difficult.

This presents an ideal opportunity, however, to reach out to the local Chamber of Commerce as a means of gathering local corporate and small business donations. The Greater Springfield Chamber of Commerce consists of over 1,700 members and regularly advocates local economic development projects. This includes support for programs and projects aimed at increasing residential density downtown and improving water and wastewater infrastructure, as well as support for the rail consolidation project itself (The Greater Springfield Chamber of Commerce, 2014). Increasing the quality of life for workers and residents downtown fits well with the Chamber's existing commitments to

improve downtown Springfield, potentially making the Chamber a likely ally for producing donations from its member organizations.

State

The State of Illinois is also a valid source of funding for such projects. For example, the Illinois Transportation Alternatives Program and the Illinois Transportation Economic Development Program allow for the funding of projects that enhance transportation routes such as bicycle routes or those that make economic development projects more directly accessible, respectively. The Illinois Department of Commerce and Economic Opportunity (DCEO) also has a number of grant and loan programs available that would apply to a linear park, rails-to-trails project. The state-level version of the federal Community Development Block Grant program, the Community Development Assistance Program (CDAP) and its sister program CDAP for Economic Development (CDAP-ED) are designed to assist communities who are pursuing projects aimed at increasing economic activity and development. Since the City of Springfield is in an entitlement area, receiving CDBG funds directly, it could make use of these funds in similar ways to that provided under CDAP.

Federal

The Federal government offers a plethora of different grant or funds-matching programs aimed at brownfield redevelopment and greening measures. Different agencies within the federal government are responsible for dispersing funds among applicants. Of these, the Environmental Protective Agency (EPA), Department of Housing and Urban

Development (HUD), Department of Transportation (DoT), and Department of Agriculture are all sources of funding for projects such as this linear park proposal.

In terms of "greening" measures, the EPA and HUD can be leveraged to fund various portions of project planning. The EPA's Brownfields Assessment Grant Program and the Brownfield Economic Development Initiative is a program designed at addressed real or perceived brownfield sites within urban areas as a means of spurring productive economic use. The Sustainable Communities Research Grant Program from HUD assists with transportation, economic development, and urban design projects.

Another notable HUD grant opportunity is the Economic Development Initiative, a program that lessens the debt burden of the project as a means of assisting the community with successfully implementing the project. The EPA's Smart Growth Implementation Assistance Program is designed to aid projects with goals of urban infill, green building, and job building. Likely the best-known source of funding for projects such as these is the MAP-21 (formerly TIGER) program from the DOT. Indianapolis leveraged MAP-21 funds in order to fund the Cultural Trail.

Quality of life improvement alone is a valid category for federal funding. The DOT's Recreational Trails Program assists with construction and maintenance costs of creating new recreational trails and facilities. DOT's Federal Highway Administration also offers the Transportation Alternatives Program, which provides funding for projects that include pedestrian and bicycle facilities, community improvement activities, environmental mitigation, recreational trail programs, and safe routes to schools (U.S.

DOT FHWA, 2013). Were the redevelopment plan to include the active reuse of vacant buildings, HUD's Sustainable Communities Community Challenge Grant would apply to any re-use strategies along the corridor.

Private

Outside of the local Chamber of Commerce, the City and Parks District could team up with local businesses as a means of funding the maintenance of different portions of the linear park, once completed. Many companies are more than eager to invest in their communities. Local proof-positive of this fact lies in an existing example: Triple A sponsored a $10,000 mural on 6th Street (below), just south of Jefferson Street in downtown as part of Downtown Springfield, Inc.'s "artification" of downtown project (DSI, 2013).

"Lincoln #109", Mural, Downtown Springfield. Artist: Michael Mayosky, 2013.

There are also a number of private or foundation-based grants available for green space development, among other goals. The 606 in Chicago shows that public land trusts can also organize funding for rails-to-trails projects like the proposal here. The Urban Land Institute (ULI) also offers funding opportunities such as the Urban Innovation Grants aimed at ULI district councils that apply on behalf of projects that "build healthy, thriving communities (ULI, 2013)." Pursuing these sorts of funding opportunities may help alleviate reliance on more traditional forms of funding sources.

Partnership Opportunities

The importance of partnering with community members cannot be overstated. There are many instances where local volunteers or interested persons could assist in the development and implementation of the linear park redevelopment project. Leveraging these assets would not only serve as a way to bring down initial and maintenance costs, but also involve the community more centrally in the project.

Partnering with the local school district, Springfield School District 186, provides a myriad of opportunities for elementary and middle school children, and their teachers: art clubs can design and execute public art murals, and natural science classes can plant and maintain landscaping. Involving the local schools would be an effective way to engage the broader community including parents and the local media. Beta Club, Key Club, and the National Honor Society are volunteer-based community service organizations that are found in local middle and high schools in the area. Each

organization requires a specific amount of community service by its members each school year, of which maintenance in this park could be a valid option.

The Greater Springfield Chamber of Commerce has already been referenced as a potential source of funding in the form of organizational or corporate donations, but there are additional opportunities to be considered in terms of creating partnerships. Local businesses could organize volunteer days for park maintenance or sponsor specific portions of the park as a means of keeping the park in good condition. Similarly, local businesses may wish to engage the community at large by being advocates of such a project, not only to generate positive press, but also to raise the profile of the park.

Finally, the community itself has many interest groups who could be strong partners in the development of the project. The Master Gardeners of Sangamon County, a group organized by the local University of Illinois Extension Office, could be involved as a partner and volunteer agency for green space implementation and maintenance. The City of Springfield currently sponsors the annual Springfield in Bloom contest that motivates not only business owners but also private homeowners to landscape their properties. Including some type of sponsored plot system along parts of the corridor would give interested gardeners a space to enter into the Springfield in Bloom contest outside of their personal properties. Local troops of the Girl Scouts and Boy Scouts of America are likely to be very excited volunteer partners, not only for education purposes but also because of the community service opportunities the park development and maintenance would provide.

Finally, the question of how to administer and maintain pocket parks or community gardens along the 10th Street corridor could be answered by the city investing in green infrastructure in areas where the local neighborhood or home owners association has agreed to take ownership of the project itself. If a community garden were to be installed, the city would need to provide relatively little in the way of assistance as interested residents would be able to take control of the plot once any existing structures and debris were cleared (assuming that said structures would already be demolished to the corridor expansion that caused the parcel to be undesirable for development in the first place). Similarly, were the park district to invest in planting a pocket park on one of these sites, the local neighborhood or homeowners association could perform the routine maintenance associated with a green space of that size.

Conclusions

Springfield, Illinois is neither a sprawling metropolis nor a rural town by any means. As the state capital and home of President Abraham Lincoln, Springfield is a lovely city with an impressive list of historical and cultural amenities. Given the plans for high-speed rail, the City is now faced with a unique opportunity to leverage the amenities and initiatives already in place.

This professional report has examined how the evolution of what we consider economic development planning has evolved in our current economic climate. No longer is industrial site selection a major economic development driver in many cities within the Rust Belt, as the country as a whole and many cities have converted to a heavily service-oriented economy. Instead, sometimes the aging infrastructure left over from those bygone industries – or the need to expand that same aging infrastructure – presents itself as an opportunity for "new" economic development strategies, specifically in the form of increasing cities' quality of life and re-engaging our connection with the natural environment as a means of remaining or increasing competitiveness.

The likelihood of success of the 3rd Street Corridor project presented here is based not only on current, alternative economic development theory, but also on the proven successes of similar examples elsewhere in the United States and abroad. Paris, New York City, Chicago, and Indianapolis all reap the benefits of projects (or plans in the case of Chicago) that reincorporate our urban rail sites, left over by industrial pasts, back into

our urban fabrics in a way that engages the community and provides value in the form of increased quality of life.

The success of the decommissioned rail corridor redevelopment in Springfield will rely heavily on the effective design of the linear park itself. Taking the local context into consideration to leverage existing amenities and create a network of existing and proposed amenities would strengthen downtown Springfield as a destination for visitors and residents. Considering the use of appropriate materials and landscaping would assist in decreasing upfront costs and improve the local environment in addition to decreasing long term maintenance costs.

Given the wide variety of creative strategies options, funding opportunities, and potential partnerships, a project of this scale is an entirely viable option for a community such as Springfield. Upfront costs can be mitigated using innovative planning strategies and thorough grant opportunity analysis. Long-term maintenance costs can also be addressed by forming partnerships with local actors in the community interested in volunteering in the park itself.

The City has stated its intention to repurpose the decommissioned corridor as a recreational pedestrian and cyclist urban trail, yet the opportunity presented by the site calls for something greater. As a city that has not kept pace with many others in terms of growth, now is time for Springfield to come into its own by building a truly world-class amenity for its residents. By incorporating green infrastructure as a linear park along this

to-be decommissioned rail line, the city and its people will reap cultural and – though arguably most importantly – economic benefits for years.

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