SOCIAL RESILIENCE
GOALS AND OBJECTIVES FOR ENGAGING URBAN DESIGN

By
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A REPORT

submitted in partial fulfillment of the requirements for the degree

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Resilience Theory: A Framework for Engaging Urban Design

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ABSTRACT

As the world continues to grow and cities continue to change, landscapes architects are constantly challenged with identifying design solutions that address the endless change of urban environments. In 1973, C.S. Holling developed the term “resilience theory,” which identified how social and ecological systems communicate across different landscape scales (Holling, C.S. 1973). In 2013, Kansas State Graduate Kevin Cunningham tested the validity of Holling’s resilience theory as a theoretical basis for urban design. This report attempts to further test the validity of resilience theory as a theoretical basis for social systems within urban design. Methodology utilized includes literature review with specific attention to current social resilience frameworks and guidelines, case study analyses, and an application of the author’s social resilience goals and strategies through a projective design of Washington Square Park, Kansas City, Missouri. Social resilience goals and strategies were developed to respond to social objectives identified within Washington Square Park RFQ/P, GDAP, Main Street Streetcar, Making Grand “Grand” and KCDC’s plan for the park. Objectives were derived based upon their relationship to resilience theory. The created social resilient goals, objectives and strategies will be specific for the revitalization of Washington Square Park. However, the process of identified social resilience goals, objectives and strategies can be utilized as a tool for designs of other urban, civic spaces. The process of identifying social resilience goals, objectives and strategies utilized within this report has the potential to continually promote landscape architects as the primary leaders in urban design practice.

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01 INTRODUCTION

Driving Forces

In the 21st century, we have shifted from an agricultural-based economy to an industry, technology and service economy. According to the World Health Organization, for the first time in history, the majority of the world's population lives in cities that are continuously growing (WHO 2013). Cities exist for many reasons, and their urban forms can be linked to their functions. Typical city functions of the past have included transportation routes, religious elements, protection, centers of government, and centers for communication, all involving some form of social interaction. Urbanization has generated challenges. As cities grow, their functions become more complex, as do the roles of landscape architects, planners, and other designers.

Current landscape architecture theory has several dilemmas. The first dilemma is its lack of systems thinking at multiple scales and times. The second dilemma is that it is too abstract and inadequately addresses the social complexities of 21st c. cities. This report proposes that "resilience theory" can help. Developed in 1973 by C.S. Holling, resilience theory can provide the social resilience goals and objectives that landscape architects, planners, and other designers need for 21st c. urban design.

Goals

This project aims to achieve the following:

• Develop a set of social resilience goals and objectives based upon C.S. Holling's resilience theory in order to analyze case studies and Washington Square Park.

• Gain an understanding of the principles of resilience theory and apply those to social systems in a manner that can then be applied to future projects.

• Synthesize social resilience goals and objectives from literature reviews and case study analysis into a set of social resilience guidelines.

• Develop a program and design based upon social goals and objectives related to Washington Square Park.

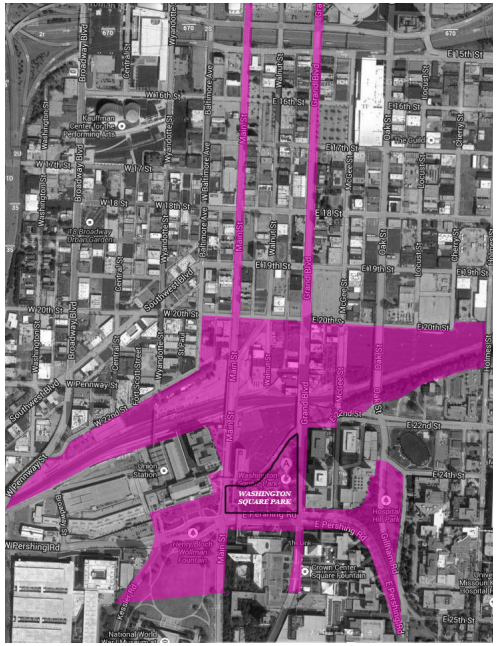
• Generate a report that will influence the design team and stakeholders of Washington Square Park.

Dilemma and Research Question

Washington Square Park, Kansas City, Missouri, has been identified as a catalyst project by the Greater Downtown Area Plan (GDAP) because of its potential to generate redevelopment in adjacent areas. The Request for Qualifications/Proposals (RFQ/P) identified five goals: promote sustainability, create a walkable downtown with authentic neighborhoods, retain and promote safety, double the population of downtown, and increase improvements (City of Kansas City, Missouri, 2013). This project's design of Washington Square Park achieves these goals.

The projective design of Washington Square Park seeks to revitalize the existing park. The site is located east of Union Station, north of Crown Center shopping area, and south of the Crossroads District. Washington Square Park is located within Kansas City's prime real-estate; however, the park is separated from its adjacent amenities and urban civic spaces. Segregation is caused by several factors. First, the railroad infrastructure located to the north of Washington Square Park separates Washington Square Park from the Crossroads District. Second, a retaining wall meant to address a change in topography also separates the park from the Crossroads District and the northern areas of downtown Kansas City. The third factor contributing to the park's separation is the lack of interactions along the surrounding streets. The fourth factor is the surrounding businesses. The businesses that surround Washington Square Park bring people to the area only during business hours. When businesses are closed, the amount of social interactions or site utilization greatly declines. This report's projective design seeks to address these factors of the park's separation.

Before site inquiry and design of social systems can occur, a set of questions must be addressed. My primary research question asks: Can I create a set of social resilience goals and objectives that can be utilized in an ever changing urban environment where there is social and civic inequality? This question and others will be explored through the methodology and literature review that follow. Then, a basic understanding of the social systems that exist within Washington Square Park and the surrounding areas is needed to identify design opportunities and constraints. Once the opportunities and constraints have been identified, gaps within the existing social systems can be addressed to improve Washington Square Park's and the surrounding area's social resilience.



1.1 - Explorative Site Boundaries
Explorative Site Boundaries – Washington Square Park and Context (Ragoschke, 2013, derived from Google Maps 2013).

Project Boundaries

Washington Square Park is located on 4.64 acres in downtown Kansas City, Missouri. The park is centrally located, north of Crown Center, east of Union Station and Main Street, south of the Crossroads District and a large parking lot owned by Union Station, and west of Hyatt Regency. Currently, Washington Square Park lacks effective programming that is limiting the park's ability to properly function in its context. The park has the ability to capitalize on the surroundings; however, social disconnects with the surroundings are limiting the park's ability to capitalize on these opportunities.

The project boundaries extend beyond Washington Square Park to account for the surrounding social systems that have influence on Washington Square Park. Site boundaries extend north encompassing the parking lot, rail right-of-way, and blocks to 20th Street, extending east encompassing Hyatt Regency, Hospital Hill Park, rail right-of-way, and parking lots up to East 20th Street, extending south to Crown Center shopping area and plazas and the northeast corner of Penn Valley Park, and extending west to encompass Union Station, rail right-of-way, and blocks to 22nd Street (See Figure 1.1 for Explorative Site Boundaries). The areas outside of Washington Square Park will be identified, but further research is needed to identify how these properties can be obtained.

Research is primarily focused upon resilience theory and social capital. Social capital has been identified by sociologist and political scientist Robert D. Putnam as the expected collective or economic benefits that are obtained through the collaboration between individuals and groups. Social capital defines the value of social systems. Social capital's values can be measured by the collective value of all social systems and the tendency of these systems' interactions

with one another (Putnam, 2000). Analysis of ecological and economical systems will be utilized based on Kevin Cunningham's resilience theory analysis framework, but will not be the focus of this report. Focusing on resilience theory and social capital allows for deeper focus on social systems and the generation of social resilience guidelines that can be utilized to gain deeper understandings of social capital in urban civic spaces.

Relevance

Washington Square Park's original planting of trees, flowers, and pathways were designed by landscape architecture firm Hare and Hare in the 1920's (Parks and Recreation Department, Kansas City, Missouri, 2013). However, the park has changed over time and needs to be revitalized. The park has been identified as a critical piece within Sasaki's 2005 Downtown Corridor Strategy and Kansas City's Park and Recreation (KCPR) 2010, Greater Downtown Area Plan. This report aims to identify and address social systems opportunities and constraints pertaining to the park that have accumulated since its' development in the 1920's.

The goals and strategies identified for Washington Square Park will be useful in the development of the social guidelines that will guide the program and design of my projective design of Washington Square Park. Adhering to the goals and strategies already identified with Sasaki's and KCPR will allow the design team and stakeholders involved with Washington Square Park with a valuable resource pertinent to capitalizing upon social capital.

Resilience Theory

Applying Resilience Theory

Current landscape architecture theories, such as landscape urbanism, landscape ecology, and ecological urbanism, attempt to capitalize on design with nature (Cunningham 2013, 1). The role of social resilience has been less prominent in landscape architecture. Resilience Alliance and Stockholm Resilience Centre define social resilience as the ability of groups or communities to sustain external dilemmas as a result of social, economic, or environmental change. Social resilience and ecological resilience define an ecosystem's ability to maintain its functions in times of stress. Many social groups are directly linked to their ecological system's resilience and depend on their ecosystem for survival; accordingly, considerable ecological resilience research exists. However, research focusing on social resilience is limited. Accordingly, my report seeks to expand social resilience research in the field of landscape architecture to provide landscape architects with a more holistic design approach for urban design.

In 1973, ecologist C.S. Holling developed resilience theory as a way to understand system changes on multiple scales. Holling defines resilience theory as "the amount of change a system can undergo and remain within the same regime--essentially retaining the same function, structure, and feedbacks" (Walker and Salt 2006, 164). Such change includes fast processes and slow processes, gradual change and episodic change, and local and global changes within social, ecological, economical evolutionary systems (Gunderson and Holling 2001, 5). Resilience theory describes these systems as socio-ecological.

Resilience theory includes three key concepts: the adaptive cycle, panarchy, and basins of attraction:

The adaptive cycle is a model generated from the comparative study of system dynamics of ecosystems. The adaptive cycle is meant to be utilized as a tool for thought, focusing upon destruction and reorganization rather than growth and conservation. This focus provides ecologists with a holistic understanding of systems organization, resilience and dynamics (Resilience Alliance 2013). The adaptive cycle represents social-ecological system dynamics and includes four phases: growth or exploitation (r), conservation (K), collapse or release (omega), and reorganization (alpha). Resilience Alliance states, "An adaptive cycle that alternates between long periods of aggregation and transformation of resources and shorter periods that create opportunities for innovation, is proposed as a fundamental

unit for understanding complex systems from cells to ecosystems to societies" (Resilience Alliance 2013).

Panarchy describes the cross-scale and dynamic nature of resilience theory. Panarchy is derived from Pan, the Greek god of nature. Panarchy is a framework consisting of nature's rules. Panarchy rationalizes the relationship of "change and persistence, between the predictable and unpredictable" (Resilience Alliance, 2013). The second part of the word, "-archies," is derived from C.S. Holling's notion of hierarchies describing the relationship between scales. Panarchy represents "…structures that sustain experiments, test its results and allow adaptive evolution" (Resilience Alliance 2013). In describing adaptive evolution, Walker and Salt state "…the processes that produce these panarchy patterns are in turn reinforced by those patterns—that is, the patterns and processes are self-organizing" (Walker and Salt 2006, 90).

Since systems can exist in alternative stable states, attraction basins are also a part of resilience theory. Variables include an attractor (stable state), ball (system) and the size of the basin. The size of a basin is determined by its latitude, resistance, and precariousness. A basin's structural composition determines the system's ability to move towards a stable state or into another basin. The difficulty of a ball (system) to move out of a basin is thought of as the system's resilience (Walker et al. 2012).

Methodology

This report consists of three parts: literature review, case study analyses, and a projective design. This multi-methodology approach combines analysis of quantitative and qualitative data (Brannen 2005, 173-175). The literature review focuses on recent texts on socio-ecological resilience to identify the relationship of resilience theory and to identify existing resilience goals and objectives associated with landscape architecture. Next, three case studies involving social resilience goals and objectives were analyzed to determine social resilience applicability in urban design. The report's third part, the projective design of Washington Square Park, Kansas City, Missouri, is guided by the alignment of social resilience goals and strategies with social goals and objectives that have been identified by GDAP, Washington Square Park RFQ/P, Making Grand "Grand", Main Street Streetcar, and KCDC's Plan. Finally, a post-design analysis and evaluation determines the validity of social resilience goals and objectives on the design of Washington Square Park.

Literature Review

The literature review bridges resilience theory literature with landscape architecture literature. The literature review began with primary sources on resilience theory. Stemming from the primary sources, four categories of resilience theory related to landscape architecture emerged. These categories were guided by Cunningham's literature approach and include: transformative, adaptive, responsive, and engaging resilience theory on urban social systems. Research on transformative resilience theory on urban social systems directly followed C.S. Holling's coining of the term resilience theory in 1973. Research on adaptive and responsive resilience theories applies resilience theory to areas of social systems in urban environments. The fourth category, engaging resilience theory, identifies current, 21st c. landscape architecture theories, frameworks, and guidelines that share collective terms of resilience theory but lack application of these terms.

By bridging resilience theory with landscape architecture theory, a common understanding of theorization and adaptation of resilience theory can be acknowledged. From this common understanding, resilience theory can explore dynamics in urban design that impact social systems. Through the application of resilience theory, the number of social system attributes becomes important to the success of economic and ecological system attributes. To validate an application of resilience theory with social system urban design, social resilience goals and objectives were developed.

Social Resilience Goals / Objectives

Social resilience goals and objectives were first created through the distillation of three literature sources: LAF 1999, SITES 2009, and NYC Parks and Recreation 2010. Case Study Method for Landscape Architecture provides a case study analysis method for landscape architects to analyze and disseminate. These methods provide a primary form of education, innovation, and testing for the profession (LAF 1999). Sustainable SITES Initiatives: Guidelines and Performance Benchmarks focuses on measuring and rewarding any project that "…protects, restores and regenerates ecosystem services – benefits provided by natural ecosystems such as cleaning air and water, climate regulation and human health benefits" (SITES 2009). High Performance Landscape Guidelines: 21st Century Parks for NYC is a manual that produces a comprehensive set of sustainable guidelines for 21st c. parks. Best practices on how parks are to be designed, constructed and maintained are outlined as park standards of the immediate future (NYC Parks and Recreation, 2010). The resulting social resilience goals and objectives are intended to add depth to Cunningham's resilience theory analysis matrix. Cunningham's analysis matrix consists of five categories within social, ecological, economical, and spatial systems over regional, metro, and site scales. The five categories are: "…identify and respond to critical thresholds, promote diversity, develop redundancies, create multi-scale networks and connectivity, and implement adaptive planning/management strategies" (Cunningham 2013, 4).

The social resilience goals and objectives serve several purposes. As analysis goals and objectives they serve as a tool to identify the extent of social resilience applied to a project, such as in case study analysis. They also serve as design goals and strategies for various project scales. The social resilience goals and objectives identify a project's resilience, not a project's success.

In order to guide this project's design for Washington Square Park, Kansas City, Missouri, these social goals and strategies were aligned with social goals identified within the GDAP, Washington Square Park RFQ/P, Making Grand "Grand," Main Street Streetcar, and KCDC's Plan.

Case Study Analysis

This project analyzed three case studies: Bryant Park, New York, New York; Military Park, Newark, New Jersey; and Klyde Warren Park, Dallas, Texas. These case studies were selected based on their similarities to Washington Square Park, Kansas City, Missouri, and they exemplify application, adaptation, and theorization of resilience with specific interest in social systems. These studies are analyzed according to the social resilience goals and strategies developed from LAF 1999, SITES 2009, NYC Parks and Recreation 2010, as well as the resilience theory analysis matrix developed by Cunningham. Cunningham's analysis matrix is utilized to identify resilience methods described in terms of 1) regional, metro, and site scale and 2) ecological, economical, and spatial systems. Social systems are defined by social resilience goals and objectives generated by the author of this report. Successes of these case studies are not determined by resilience theory frameworks or goals and strategies.

Projective Design

The projective design of Washington Square Park, Kansas City, Missouri, serves as experimentation for research and includes a post-evaluation process of the design (Deming and Swaffield 2011, 208-209). The projective design tests the social resilience goals and objectives identified within the case study analysis and current plans for Washington Square Park. The projective design will be generated for Kansas City Parks and Recreation (KCPR). The KCPR Department is currently in the process of hiring an urban design consultant to initiate a redevelopment proposal of Washington Square Park. My report will provide KCPR a projective design proposal that can be utilized to guide the redevelopment process of the park.

Limitations

This report situates resilience theory in the field of landscape architecture with the projective design of an urban, civic park (Washington Square Park). Resilience theory has been grounded in scientific research, and limitations arise when applying it specifically to landscape architecture because of the lack of research performed in landscape architecture. Also, the data generated by the GDAP, Washington Square Park RFQ/P, Making Grand "Grand," Main Street Streetcar, KCDC's Plan, LAR, SITES and NYC Parks and Recreation is all self-reported. Acknowledging limitations to my access and time frame is also important. Because of the time frame, I'm relying on goals and strategies previously gathered. Combining my social resilience theory goals and objectives derived from the literature with the current design goals and objectives for Washington Square Park will limit

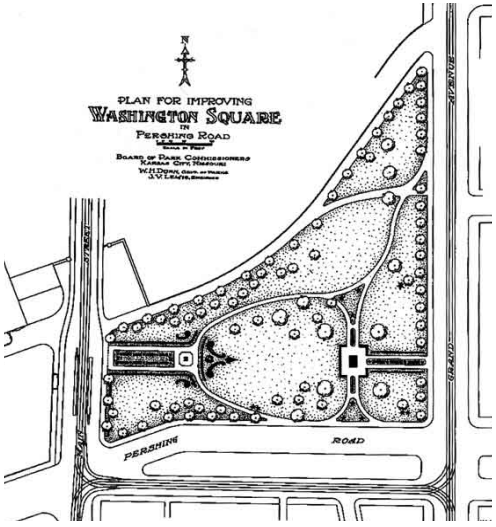
my fluency in language within landscape architecture. However, the report aims to further promote landscape architects as leaders in the urban design profession as I situate resilience theory with case studies and a projective design (See Appendix A: Argumentation Diagram for further limitations and possible conditions of rebuttal).

Results

This report will identify whether there is a method for applying resilience theory to landscape architecture and other design professions. Since resilience theory was developed by an ecologist, resilience theory has been directly linked with science-based research practice. However, resilience theory embodies concepts that can be utilized in the design profession to generate goals and objectives that can guide urban design in landscape architecture.

The social resilience goals and objectives proposed in this report are applied to case studies, redefined with goals and objectives developed for Washington Square Park, and applied to the projective design of Washington Square Park. Adding to the validation of resilience theory's application to landscape architecture was the success of the 2013 ULI/Hines Competition winner The Armory, where Cunningham applied his resilience theory framework to the ULI/Hines design. Through the application of resilience theory with a comprehensive set of goals and objectives, this report hopes to act as a social resilient guide for landscape architects and other design professionals in future urban civic landscapes.

02 BACKGROUND



2.1 - Plan for Improving Washington Square Park, 1938 (Board of Parks and Recreation Commissioners, Kansas City, MO, Drawing 11.279).

History of Washington Square Park

Washington Square Park was purchased by the Parks and Recreation Board in 1921. During its 94 years, Washington Square Park has seen change occur around it, but little change within. In 1925, a George Washington monument was added to the park. In 1926, the name George Washington Square Park was given to the park, even though the park does not resemble a square shape. As time progressed, so did Hare and Hare's original site plan of the park. In the 1980's, abundant linden trees, site pavers and the skybridge were introduced to the park. In 2011, the Korean War Memorial was introduced to the southwest corner of the site. The Washington monument has changed location to the southeast corner of the site and the skybridge is located along the southwest and west sides of the park. The skybridge connects Crown Center with Union Station a level above Washington Square Park, limiting access to the park.

Access has become an issue for the park. Even though the 4.72 acre park is spacious and roomy, there seems to be little socialization within the park. However, limited access to the park has been addressed with the blocking of Pershing Road and Grand Street when the park hosts social functions such as races, parades, and music festivities (KCPR, 2010). Blocking these streets allows people to navigate to and from Washington Square Park more easily than when they are not blocked.

Current Plans for Washington Square Park

Kansas City Parks and Recreation has developed several plans and initiatives for Washington Square Park. The most significant include the Greater Downtown Area Plan (GDAP) and the Request for Qualifications/ Proposals for the revitalization of Washington Square Park. Additional plans and initiatives include the Kansas City's Downtown Streetcar Plan, Making Grand (Street) "Grand," and Kansas City Design Center's (KCDC) master plan for Washington Square Park.

Key Social Goals and Objectives taken from Washington Square Park RFQ/P
Transform into a gathering place and civic hub.
Serve Crown Center, surrounding office buildings, Crossroads District, and the broader community.
Reinforce design with the Park & Boulevard System as a destination and compliment plans for Grand Boulevard and Pershing Road.
Perform as a dynamic space that serves people of all ages of all and all physical abilities, as well as every day and special event uses.
Provide areas of recreation.
Provide connections to multi-modal transportation.
Build upon previous plans, physical assets, and past community engagement exercises.

2.2 - Washington Square Park Request for Qualifications/ Proposals Goals and Objectives (City of Kansas City, Missouri, 2013)

Washington Square Park Request for Qualifications/ Proposals

The Kansas City Downtown Council developed the Washington Square Park RFQ/P, which was funded by the Public Improvements Advisory Committee (PIAC). The RFQ/P is now overseen by Kansas City Parks and Recreation, who hired the design consultant for the revitalization of the park. KCDC has been selected as a university design consultant to aid in the selected design consultant's team. My master's project group, Civic Space in Urban Resilience, combined with the master's group Civic Space in Urban Development will serve as sub-consultants beneath KCDC (City of Kansas City, Missouri, 2013). Along with the park's history, the needs and wants of the City of Kansas City and stakeholders, and the involvement of the stakeholders, consultants and sub-consultants, the RFQ/P also identifies key goals and objectives (See 2.2).

Key Social Goals and Objectives taken from Kansas City's Greater Downtown Area Plan
Advance the goal of creating a walkable Downtown. • elevate walking as the most important mode of transportation, • connect all districts with safe, walkable pathways, • and support transportation options beyond the automobile.
Advance the goal of doubling the population and increasing employment by attracting and/or retaining residents and businesses. • attract new businesses and foster development by leveraging the unique qualities of downtown; geographic center, access to transportation and cultural amenities, • create a proactive economic development strategy which is outcome oriented, • pursue focused and targeted approaches and finish what we've already started, • and create new tools, policies and procedures.

Key Social Goals and Objectives taken from Kansas City's Greater Downtown Area Plan continued...
Retain and Promote Safe, Authentic Neighborhoods. • maintain the unique character of our neighborhoods, • promote compatible infill, • repair streets, sidewalks, and other infrastructure, and develop programs to keep them maintained, • and keep residents and visitors safe.
Promote Sustainability • use sustainable practices to guide policy recommendations and development decisions, • and enhance existing infrastructure and utilize new development as a means to improve air and water • quality, manage stormwater and mitigate urban "heat island" (City of Kansas City, Missouri, 12, 2011).

2.3 - Kansas City's Downtown Area Plan Goals and Objectives (City of Kansas City, Missouri, 2011)

Kansas City's Greater Downtown Area Plan

GDAP generated a vision statement derived from public workshops, committee meetings, and planning teams' observations. The vision statement reads, "We must focus on connecting our neighborhoods to create a strong urban community, flourishing with diversity, fostering business, maintaining historic neighborhood identities, and sustaining a safe, vibrant, and healthy Greater Downtown Area for current and future generations" (City of Kansas City, Missouri, 5, 2011).

The GDAP has five core goals: create a walkable downtown, double the population downtown, increase employment downtown, retain and promote safe, authentic neighborhoods, and promote sustainability. The goals act as a differentiator from prior plans, as a unifying element between downtown neighborhoods' feedback and recommendations, and as a framework to guide implementation recommendations (City of Kansas City, Missouri, 8, 2011) (See Table 2.2 for key goals and objectives). Feedback and recommendations were compiled from responses to surveys that were sent out to 3,500 residents and 3,000 businesses. The results of the surveys "… established direction for plan recommendations; provided balanced input on the opinions of residents and businesses in all neighborhoods; and helped determine priorities for the plan" (City of Kansas City, Missouri, 87, 2011).

In order to create a walkable downtown, plans must prioritize walking as the most important mode of transportation, connect all districts with safe, walkable pathways, and support transportation options beyond the automobile.

The second goal, doubling the downtown population, has five sub-goals:

• create and implement a comprehensive Housing Policy for Greater Downtown,
• attract and retain residents by providing a dynamic urban experience, amenities, quality education options, and housing choices,
• promote density,
• provide diverse housing options and increase housing opportunities for those with moderate and low incomes,
• and track progress in housing (City of Kansas City, Missouri, 9, 2011).

Areas close and accessible to Washington Square Park currently lack housing options. It is assumed that the main source of Washington Square Park visitors is nearby businesses. There are housing options in the Crossroads district to the north of Washington Square Park, but they are separated from the park by the railroad and topography change. To help in achieving this goal, park plans must generate population and spark an increase in social activity within the park.

The third goal, increasing employment downtown, has four implementation sub-goals:

• attract new businesses and foster development by leveraging the unique qualities of downtown; geographic center, access to transportation and cultural amenities,
• create a proactive economic development strategy which is outcome oriented,
• pursue focused and targeted approaches and finish what's already started,
• and create new tools, policies and procedures (City of Kansas City, Missouri, 10, 2011).

Washington Square Park is surrounded by businesses on three of its four sides; it is assumed that these businesses provide the majority of visitors to the park. Identifying the strategies to increase employment will aid in design plans for park.

The fourth goal, retain and promote safe, authentic neighborhoods, will be essential in the redevelopment of Washington Square Park. There are four sub-goals:

• maintain the unique character of our neighborhoods,
• promote compatible infill,
• repair streets, sidewalks, and other infrastructure, and develop programs to keep them maintained,
• and keep residents and visitors safe (City of Kansas City, Missouri, 11, 2011).

It is important to look at the context surrounding Washington Square Park. Site

boundaries have been extended beyond the current site boundaries of the park to understand social systems and the linkages social systems have within and outside of the park.

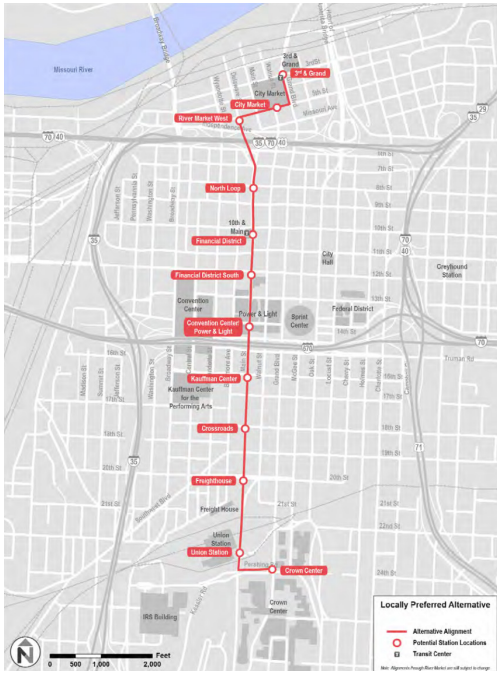
The last main goal, promoting sustainability, has two sub-goals:

• use sustainable practices to guide policy recommendations and development decisions,
• and enhance existing infrastructure and utilize new development as a means to improve air and water quality, manage stormwater and mitigate urban "heat island" (City of Kansas City, Missouri, 12, 2011).

Sustainability became popular in the United States in the 1960's and 1970's when environmentalists identified stressors that urban sprawl was placing on the natural environment. Environmentalists sought new, "sustainable" development strategies that would lessen the strain human activities had on the environment. However, sustainable strategies lack the ability to be empirically measured: "Sustainability in itself is not a thing and therefore not an absolute quantity to be measured. It changes as an idea based on the perceptions of onlookers" (Mitra 2003, 30).

The United States Environmental Protection Agency (US EPA) bases sustainability on one principle: "Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment" (US EPA 2013).

However, as researchers like Walker and Salt state, "… there is no sustainable state or an ecosystem, a social system, or the world. It is an illusion, a product of the way we look at and model the world. It is unattainable, in fact… it is counterproductive, and yet it is a widely pursued goal" (Walker and Salt 2006, 7). Sustainability has become a cliché. It is time that we build upon the original intentions of sustainability and develop new methods of engaging a balance of social and ecological functions within our cities. Resilience theory has the ability to synthesize pertinent research goals and strategies and develop new methods to engage 21st c. cities.



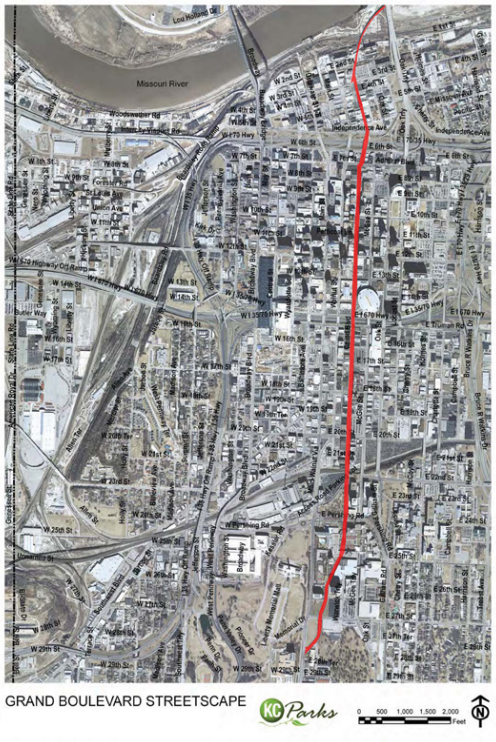
2.3 - Kansas City Streetcar Proposal Map (City of Kansas City, 2012).

Key Social Goals and Objectives taken from Main Street Streetcar
Transform Main Street into a corridor where people can live, work, and shop and be entertained.
Provide public transportation from the River Market district, to the Central Business district, to the Crossroads district to Union Station/ Crown Center district.
Increase walkability in downtown Kansas City.
Decrease automobile dependency in downtown Kansas City.
Provide access to urban civic spaces.
Spark economic development throughout the corridor and neighboring areas (City of Kansas City, 2012).

2.4 - Main Street Streetcar Goals and Objectives (City of Kansas City, 2012)

Kansas City's Downtown Streetcar Plan

The Kansas City's Downtown Streetcar Plan is a catalyst project similar to Washington Square Park. In this plan, a proposed streetcar would run along Main Street, connecting Washington Square Park with Downtown Kansas City (City of Kansas City, 2012) (See Table 2.3 for key goals and objectives). A streetcar would increase pedestrian access to Washington Square Park and create social system connections throughout the city. Anticipating change is critical to successful program development for social systems.



2.5 - Making Grand "Grand" Map (City of Kansas City, Missouri, 2013)

Key Social Goals and Objectives taken from Making Grand "Grand"
Safe, livable and walkable downtown.
Transform Grand Street into a healthy mixed-use corridor simulating investment in retail and housing.
Direct focus on transit and new bike facilities.
Improve pedestrian experience by: maximizing connections, minimizing intersection crossing distances, improve crosswalks and enhance sidewalk activity.
Create new parks and greenspace along the Grand Street.
Program Grand Street to be the signature address.
Integrate sustainable practices, such as stormwater management.
Compliment Main Street's future streetcar proposal.
Utilize Grand as an example for future urban Boulevards.
Integrate Kansas City vernacular (City of Kansas City, Missouri, 2013).

2.6 - Making Grand "Grand" Goals and Objectives (City of Kansas City, Missouri, 2013)

Making Grand (Street) "Grand"

Making Grand (Street) "Grand" is another catalyst project. This plan envisions downtown Kansas City as having a main linkage corridor. The plan envisions Grand Street as linking the north downtown River Market District south to the Central Business Downtown District, to the Crossroads District to the south downtown Crown Center district. Making Grand "Grand" goals and objectives were developed from a grassroots community effort (City of Kansas City, Missouri, 2013) (See Table 2.4 for key goals and objectives). Since Grand Street is a major source of access to Washington Square Park and is incorporated into this project's site boundaries, the communities' design strategies identified within Making Grand (Street) "Grand" will be acknowledged as I develop my projective design of Washington Square Park.

Key Social Goals and Objectives taken from KCDC Downtown Plan
Rethink, reconsider, and re-envision Kansas City's downtown green and civic spaces and their relationships with one another.
Provide visions for ordered urban, civic spaces that will improve downtown Kansas City's functional and spatial relationships.
Act as an agent to generate qualitative change and development in downtown Kansas City (KCDC, 2012).
Washington Square Park Goals and Objectives
Capitalize upon views of the Crossroads district and Central Business district.
Improve connections northward to the Crossroads and Central Business districts.
Program the park for an array of users and activity.
Revitalize the park to serve as a point of reference with multiple destinations.
Provide a space that better connects Crown Center and Union Station with the Crossroads district.
Program the park to capitalize upon the streetcar plan, Making Grand "Grand" Plan, and Union Station and Bike Sharing programs.
Cap northern surface parking lot to reduce urban heat island effect and provide underground parking that still serves Union Station (KCDC, 2012).

2.7 - KCDC Downtown Plan Goals and Objectives (KCDC, 2012)

Kansas City Design Center's Plan for Washington Square Park

The Kansas City Design Center (KCDC) developed visionary plans for Kansas City's downtown green and civic spaces within a document called "Reconnecting: Comprehensive Vision Plan for Green + Civic Spaces in Greater Downtown Kansas City." Within this document, KCDC identifies Washington Square Park as an anchor park, which is an iconic park that has permanence and embodies the identity of Kansas City (KCDC, 2012). KCDC has identified the park as a destination park for both Main and Grand Street. Their plan is based upon goals already established by the GDAP and RFQ/P. The work of KCDC will guide the incorporation of social capital promotion in Washington Park plans (See Table 2.5 for key goals and objectives).

Resilience Theory in Context

Resilience Theory

Since the 1950's, the world has grown more than 3% annually. Today, urban areas are increasing in size. Nearly 60 million people move to urban areas annually. It is estimated that between 2025 and 2030, global urban populations will increase 1.5% annually. By the year 2050, urban populations are expected to double in size, increasing from 3.4 billion in 2009 to 6.4 billion in 2050 (WHO, 2013). As the world's urban population increases, social systems can expect to become even more complex, isolated, and disconnected than before (Cornwell 2009, 31), presenting designers and planners with never-before-seen dilemmas in social, economic, and ecological urban systems.

Resilience theory serves as a theoretical approach for designers and planners to solve these dilemmas in social, economic, and ecological urban systems. Developed in the 1970's by ecologist C.S. Holling, resilience theory aids in the understanding of the complexity of changes in urban environments. Holling defined resilience as "the amount of change a system can undergo and remain within the same regime—essentially retaining the same function, structure and feedbacks" (Walker and Salt 2006, 164).

The Adaptive Cycle

System states, or structure and functions, can be identified through the adaptive cycle phases. There are four phases to the adaptive cycle (Fig 2.1): rapid growth (r), conservation (K), release (Omega), and the reorganization phase (Alpha), all located within a loop. The term adaptive cycle has been utilized to describe a systems state. These complex systems "consist of relationships between elements at a number of scales and within nested systems" (Du Plessis 2008, 3).

Design strategies are one of multiple factors contributing to the success of a healthy, safe community. Identifying how social systems at a site scale impacts regional and metro scales is fundamental when evaluating resilience. Holling explained that an adaptive cycle "aggregates resources and periodically restructures to create opportunities for innovation" and "is a fundamental unit for understanding complex systems, from cells to ecosystems to societies to cultures" (Holling 2001, 403).

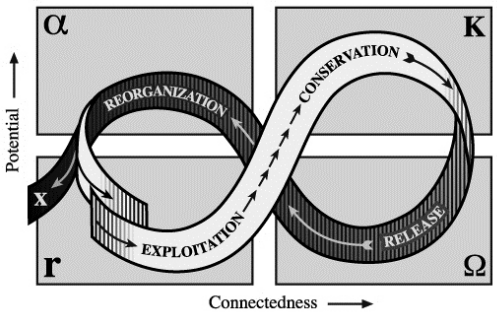
Panarchy

Panarchy differentiates resilience theory from prior models (Cunningham 2013, 14). Panarchy addresses properties that "emerge from the interactions between slow-moving and fast-moving processes that have large spatial reach and processes that are relatively localized" (Gunderson and Holling 2001, 9) (Fig 2.2). The cycle can repeat itself on many scales; the higher the scale, the higher the impact and the slower the changes. The smaller the scale, the lower the impact and the faster the changes. All the scales are interconnected, and changes on smaller scales can greatly affect changes at larger scales.

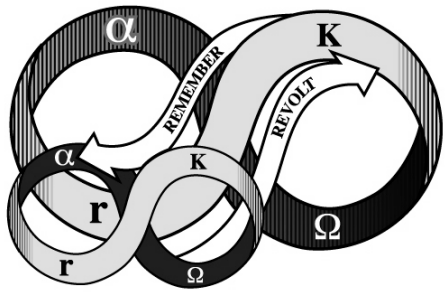
The reorganization phase releases cumulative capital and provides opportunity for creative destruction. Creative deconstructions in this case will allow social development out of the destruction of existing social systems. Washington Square Park serves as a small-scale, fast-moving system and the seed for a new cycle. This approach will allow Washington Square Park to be transformed into a better pedestrian realm. A better pedestrian realm in return will create an increase in health, welfare, and safety.

Attraction Basins

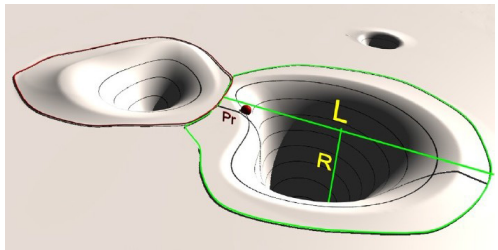
A basin of attraction is a term used to describe systems in a three-dimensional term. Basins of attraction are exactly what they sound like. They are basins that have a main "attractor," with the possibility of multiple "attractors." Systems may have multiple basins with multiple "attractors" and a main "attractor." Basins of attraction describe systems in three dimensions: latitude, precariousness, and resistance. Latitude is the width of a basin, or the maximum amount of change a system can undergo before it collapses. Precariousness represents the current identification of a system and how close the system is to a critical threshold, where the system will not be able to recover. Resistance represents the depth of the basin and the degree of difficulty that is required to change the system (Walker et al 2004). A system is resilient when it is able to stay within the basin of attraction. However, the basins of attraction are constantly changing due to the influence of external forces outside of the basins. These external forces are often viewed as human actions such as pollution and water consumption. The attraction is always located within the lowest point of the basin. The system is always performing a balancing act trying to keep the system in a stable state (Walker and Salt 2006, 54). If the system crosses a threshold and moves into another basin that has different functions and composition, then the system may generate positive or negative change to socio-ecological functions (Fig. 2.3) (Walker and Salt 2006, 55-56).



2.8 - The Adaptive Cycle - The adaptive cycle consists of phases within an infinite loop. Phases include exploitation, conservation, release, and reorganization. Systems can go through various routes. This diagram provides a generalized idea of an adaptive cycle and its phases (Gunderson and Holling 2002, 34).



2.9 - The Panarchy - "A panarchy is a nested set of adaptive cycles that represent the cross-scale interaction between complex systems… Small-scale adaptive cycles influence larger scales. Visa-versa" (Resilience Alliance 2013).



2.10 - Basins of Attraction - A system can be represented as a ball within a basin. In this case, the main basin of attraction is on the right. The system is attracted to the bottom of the basin; however, due to external forces, the system can cross the threshold and enter into another basin of attraction (right). L = Width of the Basin. R = Resistance. Pr = Precariousness (Walker and Salt, 2004).

Current Resilience Theory Research

As attention to "sustainability" research has increased, so have attention to research on resilience theory. Several research centers, including the Resilience Alliance and the Stockholm Research Centre, have taken initiatives on exploring the dynamics of social-ecological systems. The Resilience Alliance is composed of scientists and practitioners from many professions, and it develops new research that further advances the concepts of resilience, transformability, and adaptability that form the foundation of sustainability policy and practice (Resilience Alliance 2013). The Stockholm Resilience Centre aims to advance the governance of social-ecological systems with emphasis on resilience – "…the ability to deal with change and continue to develop" (Stockholm Resilience Centre 2013). Carl Folke, Science Director of Stockholm Resilience Centre, stated, "We want to build a unique trans-disciplinary research environment where innovative ideas can flourish. By combining new forms of cooperation with a holistic perspective, we hope to generate the insights that are needed to strengthen societies' and the ecosystems' capacities to meet a world which spins faster and faster" (Stockholm Resilience Centre 2013).

Goals & Strategies of Resilience Theory

Resilience theory has broad goals and strategies for increasing the ability of a system to withstand change while retaining its structure, function, identity and feedbacks (Walker and Salt 2006, 154). Goals and strategies address the "… paradigm shift in natural resource management from top-down, command-and-control optimization, to the promotion of resilience and self-organization," engage resource management and planners in Adaptive Environmental Assessment and Management (AEAM) framework and governance, and bring awareness of resilience theory research findings to policy- and decision-makers (Resilience Alliance 2013).

Landscape architects and designers have the ability to influence policy- and decision-making processes. Landscape architects and designers attempting to apply resilience theory to their practice design with nonlinear dynamics, cross-scale interactions, and complex adaptive systems. Designs are much more than visualizations on paper; they are, in their best sense, social-ecological pieces of art. However, though designs may be artful in their illustration, how effectively do they apply to resilience theory?

In order for designs to effectively apply resilience theory, policy- and decision-makers must prioritize systems, thresholds, and scales. The hierarchy of prioritization is

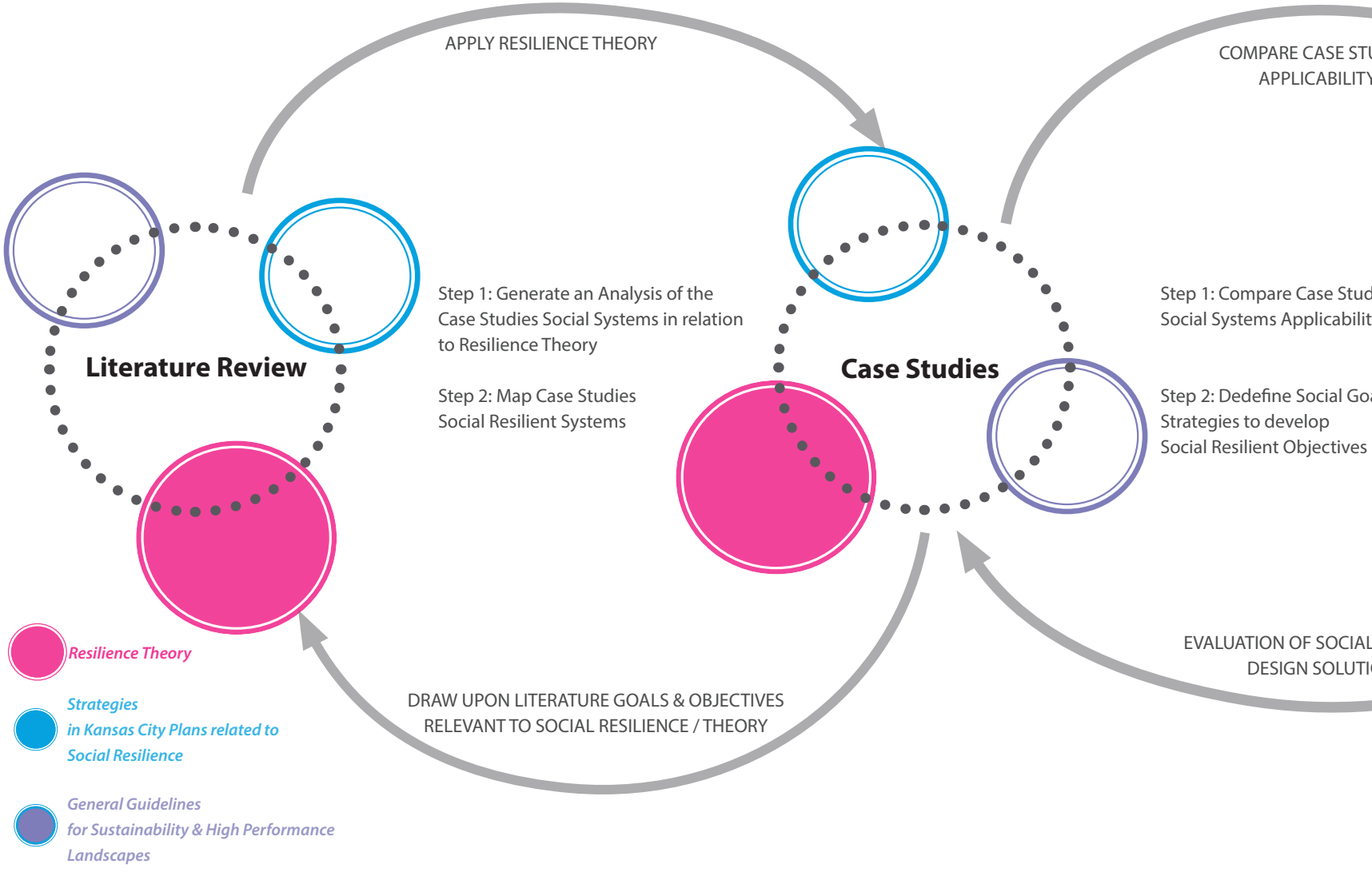
crucial in the system's ability to exemplify resilience at different spatial and temporal scales (Folke et al. 2002, 21). The proceeding chapters identify research that has been performed in order for landscape architects and other designers to have the ability to utilize resilience theory frameworks and guidelines to continue to be leaders in urban design.

Social Resilience

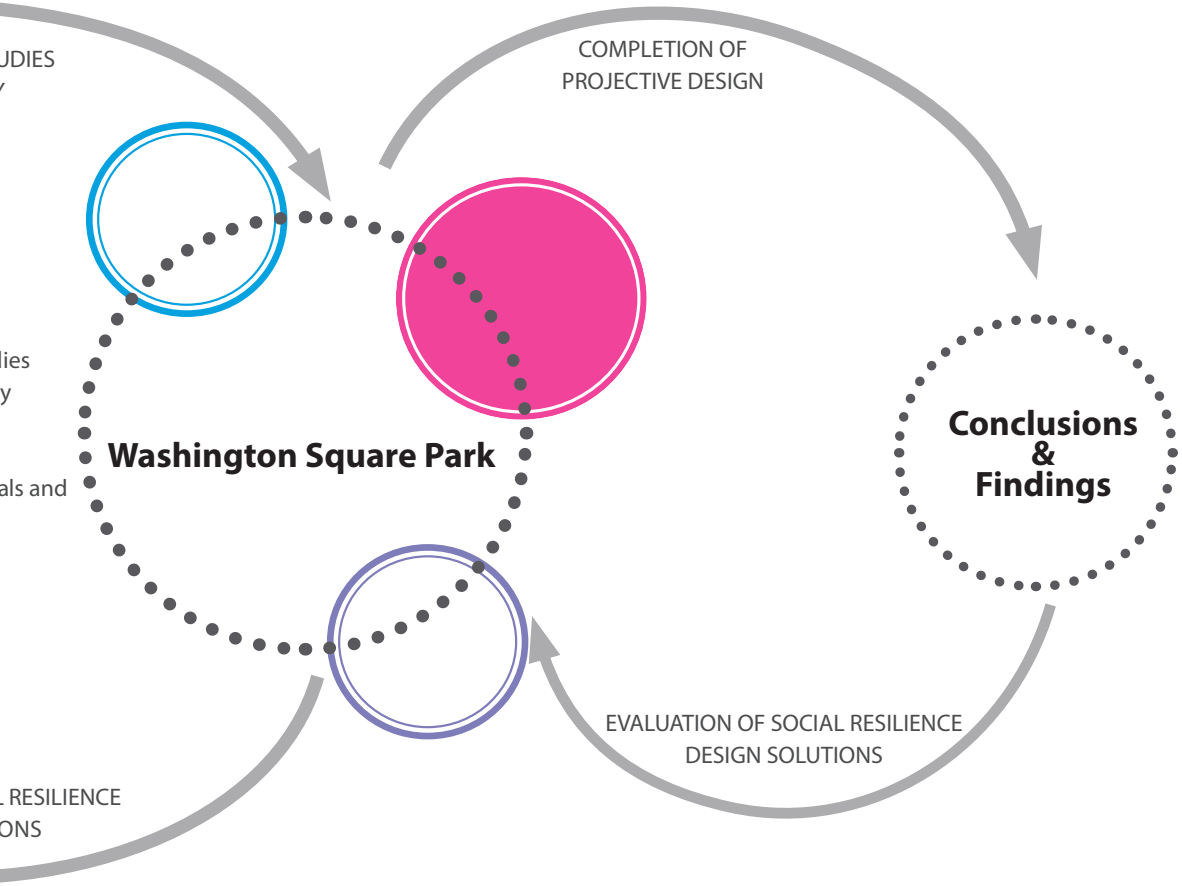
ASLA describes social sustainability as involving "…the development of resilient communities that meet residents' health and social needs over the long-term…. Residents are empowered; have equal access to green, healthy spaces; can choose among multiple transportation options; and enjoy a high quality of life" (Sustainable Sites Initiative, 2009). Social resilience is based upon a social systems ability to promote trust, reciprocity, collaboration, and knowledge between social systems on multiple scales. The value of social resilience can then be determined based on the success of the connections between social systems (Putnam, 2000). Observing the functions of social resilience creates a greater understanding of the success or failure of social systems.

The first function, knowledge transfers, depend on the success of social capital. The ability for people to learn from one another or increase their understanding of their environments and adapt to changes depends on social systems' ability to function (Putnam, 2000). Secondly, norms of reciprocity allow individuals or groups to create bonding networks within their social systems. The third function of social resilience, collaboration between individuals and groups, depends on the social system they're a member of. However, collaboration between individuals and groups can generate new social systems. Finally, the promotion of trust allows people within a given social system to increase their solidarity, or the ties within society that connect people together (Putnam, 2000).

03 Methodology



Social Resilience



3.1 - Methodology Map (Ragoschke, 2014)

Methodology

The methodology of this report consists of three parts: literature review, case study analyses, and a projective design. Distinctions are made between research strategies and approaches in order to determine the application of social resilience guidelines for urban design. The process of this report began with a literature review of recent texts on socio-ecological resilience to identify the relationship of resilience theory and to identify existing resilience goals and objectives associated with landscape architecture. Three case studies were analyzed from the developed social resilience goals and objectives to determine social resilience applicability in urban design. Following the case study analysis, social resilience goals and strategies will be redefined with social goals and objectives that have been identified by GDAP, Washington Square Park RFQ/P, Making Grand "Grand", Main Street Streetcar, and KCDC's Plan in order to guide social design goals and objectives of the projective design of Washington Square Park, Kansas City, Missouri. Following the projective design, a post-design analysis and evaluation will be performed to determine the validity of social resilience goals and objectives on the design of Washington Square Park.

Methodology

The methodology of this report includes literature review of resilience theory and current frameworks and guidelines that identify the importance of social capital, case study analysis of several parks similar to the site of the projective design, an application of the created social resilience goals and objectives on the projective design of Washington Square Park, Kansas City, Missouri, and a post-design analysis of Washington Square Park. Social resilience goal and objectives identified by Kevin Cunningham‘s resilience theory framework, Sustainable Sites Initiative (SITES), New York City Parks and Recreation – High Performance Landscape Guidelines, and Landscape Architecture Foundation (LAF) guidelines will be utilized to identify social goals and objectives within case studies. Goals and objectives will then be grouped with social goals and objectives already established for Washington Square Park through GDAP, Washington Square Park RFQ/P, Main Street Streetcar, Making Grand “Grand,” and KCDC’s plan to guide the projective design of Washington Square Park.

The social resilience goals and objectives developed will fit within five categories of Cunningham‘s resilience theory Analysis Matrix: identification and response to thresholds, promotion of diversity, development of redundancies, creation of multi-scale networks and connectivity, and implementation of adaptive planning, management, and design practices. This report identifies how to explore and design physical spaces for communication, how to design communication landscapes that connect people and/or spaces, and how to design interactive interfaces that connect spaces.

By providing designers with a set of social resilient goals and objectives, corresponding goals and objectives can be easily identified and practiced in landscape architecture and other design professions. The creation of these goals and objectives will have been identified through the process of my methodology by:

- merging frameworks from a literature review,
- deriving social resilient goals and strategies to create social resilient guidelines,
- applying guidelines to case studies,
- results of the case studies applied back to social resilience guidelines,
- deriving a set of questions from the revised social guidelines,
- analyzing Washington Square Park,
- identifying dilemmas at Washington Square Park,
- extracting pertinent strategies from the revised social guidelines,
- determining program development of Washington Square Park,
- creating a master plan and phasing of Washington Square Park,
- and evaluating strengths and weaknesses of my social resilience guidelines.

Case Study Analysis

Case studies were determined by parks that have overcome adversity and have shown resilience. Case studies include the following: Bryant Park, New York, New York; Military Park, Newark, New Jersey; and Klyde Warren Park, Dallas, Texas. Social resilience goals and strategies are identified at the metro, regional, and site scales for the categories of thresholds, diversity, redundancy, and connectivity with the possibility of adding the social section back to the planning division for each case study (See Table 3.1 for analysis matrix). The case studies identified in the literature review provide a basis for my social resilience guidelines to be applied. Case studies also provide quantitative evidence, have multiple sources of evidence, and include benefits from prior resilience theory research. It is important to note that social resilience is the main topic; however, ecological, economic, and spatial resilience will be identified in the case studies and projective design.

Social Resilience Analysis Matrix			
	Regional	Metro	Site
Thresholds			
Diversity			
Redundancy			
Connectivity			
Planning			

3.2 - Social Resilience Analysis Matrix, derived from Cunningham, 2013 (Ragoschke, 2013). Social resilience is calculated across regional, metro and site scales for their system's thresholds, diversity, redundancy, connectivity and planning. See Appendix # for Cunningham's original analysis matrix.

The case study analysis utilizes the analysis matrix developed by Kevin Cunningham. Cunningham created the matrix by combining analysis methods identified in Resiliency Thinking (Walker and Salt 2006) and From Fail-Safe to Safe-to-Fail: Sustainability and Resilience in the New Urban World (Ahern 2011). Social goals and objectives were created to analyze social categories of Cunningham's matrix. The social resilience goals and objectives were created through the distillation of frameworks and guidelines identified by LAF, SITES and NYC Park and Recreation.

A Case Study Outline adopted from "Landscape Performance Series"
Context
Site Analysis
Project Background & History
Gensis of Project
Design, Development and Decision-Making Process
Role of Landscape Architect
Program Elements
Maintenance and Management
User/Use Analysis
Peer Reviews
Criticism
Significance & Uniqueness of Project
Limitations
Generalizable Features and Lessons
Future Issues/ Plans

3.3 - A Case Study Example taken from "Landscape Performance Series" (Landscape Architecture Foundation 2010)

In Case Study Method for Landscape Architecture (LAF 1999) the case study method is identified as a highly valuable tool in landscape architecture. Many other professions such as law and healthcare utilize the case study method to critically analyze and disseminate analyze and disseminate what?. Case study methods identified include: context, site analysis, project boundary and history, genesis of project, design, development and decision-making process, role of landscape architect, program elements, maintenance and management, user and use analysis, peer reviews, criticism, significance and uniqueness of project, limitations, generalizable features and lessons, future issues and plans (See Table 3.2 for LAF: A Case Study Outline). (Landscape Architecture Foundations 1999). These case study methods were consolidated and combined with methods proposed by SITES and NYC Parks and Recreation.

Key Social Goals and Objectives taken from The Sustainable Sites Initiative: Guidelines and Performance Benchmarks 2009
Promote equitable site development.
Promote equitable site use.
Promote sustainable awareness and education.
Protect and maintain unique cultural and historical places.
Provide for optimum site accessibility, safety, and wayfinding.
Provide outdoor spaces for social interaction.
Provide views of vegetation and quiet outdoor spaces for mental restoration.
Reduce light pollution.

3.4 - Key Social Goals and Objectives taken from The Sustainable Sites Initiative: Guidelines and Performance Benchmarks 2009 (Sustainable Sites Initiative 2009)

Sustainable SITES Initiatives: Guidelines and Performance Benchmarks 2009 (SITES 2009) identify 15 prerequisites and 51 credits that define landscape design from development to site selection to maintenance. Prerequisites and credits can be distilled into the following: site selection, pre-design assessment and planning, site design—water, site design—soil and vegetation, site design—materials selection, site design—human health and well-being, construction, operations and maintenance, and monitoring and innovation. Relevant social goals and objectives were derived from human health and well-being prerequisite (See Table 3.3 for key goals and objectives). These prerequisites and credits identify the rating system which SITES utilized to determine the "sustainability" of a project. It is important to note that a project's "sustainability" is determined after construction, not before and not phased out post-construction.

Key Social Goals and Objectives taken from New York City Parks and Recreation: 21st Century Parks for NYC
Collaboration and Participation
• Encourage direct and open communication between Park's department and other agencies.
• Engage the public in the consulting process so their knowledge and recreational goals are in the design.
• Aid in the development of community stewardship.
Public Health
• Encourage activity that improves the health and welfare of the residents/ visitors.
Education
• Designs should educate the public of the ecological benefits of urban parks.
• Educate future generations the importance of having urban parks.
• Transform social priorities in regards to ecological and economic objectives.
Long-Term Thinking
• Provide future generations with sustainable urban parks aided by regenerative systems.
• Disregard resources that contribute to global warming or habitat degradation.

3.5 - Key Social Goals and Objectives taken from New York City Parks and Recreation: 21st Century Parks for NYC (NYC Parks and Recreation 2010)

Lastly, High Performance Landscape Guidelines: 21st Century Parks for NYC (NYC Parks and Recreation, 2010) contributes to the guidelines identified by LAF and SITES. High Performance Landscape Guidelines: 21st Century Parks for NYC identifies principles that represent the values of New York City Department of Parks and Recreation. Principles are divided into four categories: design, ecology, economy, and society. Design includes the engagement of all users, nature, and response to site context. Ecology includes support of ecological function and increase in diversity and interconnectivity. Economy includes resiliency and performance. Lastly, society includes collaboration and participation, public health, education, and long-term thinking. Society's goals and objectives will be utilized in the case study's social system's analysis (See Table 3.4 for key goals and objectives).

Scales and Systems

Similarly to Cunningham's resilience theory analysis matrix, a cross-scale relationship between systems will be performed. Cunningham's resilience theory framework for engaging urban design will be revised on all three scales: regional, metro, and site for thresholds; and diversity, redundancy, and connectivity with the possibility of adding social resilience to the planning division. The results of the revision will be utilized to guide the projective design of Washington Square Park, Kansas City, Missouri (Cunningham, Kevin, 2013) (See Appendix D: Kevin Cunningham's Analysis Matrix).

Spatial scales are characterized by regional, metro, and site scales. Due to the nature of case studies' identity within urban environments, it is important to identify what fits in what scale. Cunningham states, "… the regional scale looks at how the city fits into the context with a network of cities, the metro scale is associated with the city itself, and the site scale is anything form a single acre to approximately 30 acres" (Cunningham 2013, 28). Importance is placed on analyzing case studies on what scale they were designed at. Since case studies are urban civic spaces, site scale becomes clear as the design's intended scale.

Analysis

A site inventory and analysis will be performed on Washington Square Park after social resilience goals and objectives have been establish through literature, applied to case studies, and then re-established with the goals and objectives identified with the GDAP, Washington Square Park RFQ/P, Making Grand "Grand," Main Street Streetcar Plan and KCDC's Plan. Inventory and analysis will serve as the basis for the projective design of Washington Square Park. The analysis sets out to identify the dilemmas of Washington Square Park and extract pertinent strategies from my social resilience goals and objectives. Analysis of Washington Square Park will be diagrammed and included into a final book. Then program development of Washington Square Park can proceed to develop a projective design of Washington Square Park.

An analysis of Washington Square Park will allow me to identify current dilemmas and opportunities with the current site design. I will utilize my social resilience goals and objectives that I distilled throughout the literature review of current frameworks and guidelines to aid in site analysis. It will be critical that dilemmas and opportunities are identified across multiple scales in order to design resiliently. Resilience theory identifies systems' ability to be resilient across site, metro, and regional scales. Identifying dilemmas and opportunities across site,

metro, and regional scales will further guide the projective design of Washington Square Park.

Site analysis data will be collected through various applications and will be critically mapped across multiple scales pertinent to social systems related to Washington Square Park. Site analysis will be mapped utilizing ArcGIS with the combination of other means of creativity, such as Adobe Creative Cloud products.

Program Development

The program of Washington Square Park will be developed throughout the methodology process. The goals and objectives identified within the Kansas City plans: GDAP, KCDC, Main Street Streetcar, and Making Grand "Grand" and the literature will be utilized to develop social resilience goals. These goals will be utilized to develop key objectives for program development. From the social resilience goals and objectives, each guideline will be utilized to inform custom objectives specific to Washington Square Park. It is important to note that the social resilience guidelines are to be used as an overarching design guideline. When applied to other designs, key objectives must be derived from the guidelines.

Projective Design

After the analysis of Washington Square Park has been completed, a master plan will be designed through plans, elevations, and diagrams, and evaluated based upon the social resilience guidelines. After the master plan is complete, a phasing plan will be established to identify the process of development over time. After the master plan and phasing plan have been completed, an evaluation of Washington Square Park's master plan will be performed to test the social resilience goals and objectives that I have established. Once the social resilience goals and objectives have been tested, a reflection of the strengths and weakness will complete the projective design of Washington Square Park.

Reflection

After the design of Washington Square Park, Kansas City, Missouri, has been completed, an analysis of its successes and limitations will be performed. The analysis of Washington Square Park will be performed with the social resilience goals and objectives that were developed from the literature review and existing plans for the park. The design will be evaluated based on its ability to meet these goals. Limitations of the design will be addressed on its relevance to the site, scale, and location. Further research into the limitations will be recommended for future study.

Pertinence of Methodology

The methodology will assist me in achieving my goals and addressing my research question: Can I create a set of social resilience goals and objectives that can be utilized to analyze social resilience in an ever changing urban environment where there is social and civic inequality? Combining goals and objectives identified by stakeholders with the goals and objectives identified within the literature, I will be able to produce a design that responses to both the Washington Square Park RFQ/P and my research question. During the process, I will be able to reflect on knowledge gained from the application of goals and objectives identified within Kansas City plans and literature. The application of resilience theory with the goals and objectives for Washington Square Park will allow my report to contribute to the plans already established for downtown Kansas City.

04 LITERATURE

NYC PARKS & RECREATION
"HIGH PERFORMANCE LANDSCAPE GUIDELINES: 21ST CENTURY PARKS FOR NYC."
(NYC PARKS AND RECREATION, 2010)

target audience

community

valuable assets

time

CUNNINGHAM
"RESILIENCE THEORY:
A FRAMEWORK FOR ENGAGING URBAN DESIGN."
(CUNNINGHAM, 2013)

General Guidelines for Sustainability & High Performance Landscapes

focus

build

results

nurture

engage

LANDSCAPE ARCHITECTURE FOUNDATION (LAF)
"CASE STUDY METHOD FOR LANDSCAPE ARCHITECTURE."
(LANDSCAPE ARCHITECTURE FOUNDATION, 1999)

communication

evaluation

amplify

long-term

SITES
"SUSTAINABLE SITES INITIATIVES:
GUIDELINES AND PERFORMANCE BENCHMARKS 2009."
(SITES, 2009)

SOCIAL RESILIENCE

washington square park

transportation access

gardens

food

play equipment

grand street

CITY OF KANSAS CITY
"WASHINGTON SQUARE PARK
REQUEST FOR QUALIFICATIONS/ PROPOSALS."
(CITY OF KANSAS CITY, MISSOURI, 2013)

art installations

CITY OF KANSAS CITY
"MAKING GRAND GRAND."
(CITY OF KANSAS CITY, MISSOURI, 2012)

restrooms

open lawn

CITY OF KANSAS CITY
"GREATER DOWNTOWN AREA PLAN."
(CITY OF KANSAS CITY, MISSOURI, 2011)

movable seating

recycling

water feature

Strategies in Kansas City Plans pertaining to Social Resilience

parking

plaza

pavilion

viewing areas

KCDC
"RECONNECTING:
COMPREHENSIVE VISION PLAN
FOR GREEN + CIVIC SPACES IN
GREATER DOWNTOWN KANSAS CITY."
(KANSAS CITY DESIGN CENTER URBAN STUDIO, 2012)

amphitheater/ event space

fixed seating

CITY OF KANSAS CITY
"KANSAS CITY DOWNTOWN
STREETCAR, TIGER IV GRANT APPLICATION."
(CITY OF KANSAS CITY, MISSOURI, 2012)

recreational games

main street streetcar

4.1 - Literature Map (Ragoschke, 2014)

Literature

A detailed literature review was conducted to situate resilience theory in the profession of landscape architecture. The literature review began with resilience theory sources that orient resilience theory as the foundation of this report. Stemming from the resilience theory literature are two additional categories: Strategies in Kansas City Plan pertaining to Social Resilience and General Guidelines for Sustainability and High Performance Landscapes. Strategies in Kansas City Plan pertaining to Social Resilience was utilized to identify current social resilience goals and objectives for projective design of Washington Square Park. General Guidelines for Sustainability and High Performance Landscapes was utilized to identify current social resilience practices in the landscape architecture profession.

Literature Review

The previous chapters identified goals and objectives for Washington Square Park as developed by the Washington Square Park RFQ/P, GDAP, Making Grand "Grand," Main Street Streetcar, and KCDC's plan for the park. In order to align these goals and the goals of urban design with those of resilience theory for my projective design for Washington Square Park, additional research is needed to identify social capital of urban civic spaces, as well as theory on urban civic spaces. To that end, this section reviews literature on resilience theory and social capital

Literature was collected based on its pertinence to landscape architecture, urban design, and resilience theory. The following four categories were essential to the placement of resilience theory into the landscape architecture profession: transformative, adaptive, responsive, and engaging resilience theory. These categories served as the base categories; the literature within cross-pollinated with literature from other categories.

Literature Groups

The first category, transformative resilience theory, consists of the work performed by C.S. Holling in Resilience and Stability of Ecological Systems, C.S. Holling in Understanding Complexity of Economic, Ecological, and Social Systems, Gunderson and C.S. Holling in Panarchy: Understanding Transformations in Human and Natural Systems, and Walker and Salt in Ecology and Society: Resilience, Adaptability and Transformability in Social-Ecological Systems. From these texts, resilience theory has transformed from an ecological approach to a more holistic approach to landscape architecture.

Adaptive resilience theory includes the literature that applies resilience theory to landscape architecture, planning, and other social-ecological research professions. Major contributors to this category are the Resilience Alliance and the Stockholm Resilience Centre. These two contributors consist of many authors who are employed by these organizations to adapt resilience theory to the application of policy- and decision- making.

Responsive resilience theory consists of literature that current landscape architects are utilizing to support landscape architecture theory and social urbanism. The literature does not specifically identify the work of C.S. Holling but draws correlations to the key fundamentals of resilience theory. Responsive resilience theory identifies landscape architects who have contributed to the ongoing success of resilience theory.

Engaging resilience theory concludes the literature review. This category identifies literature about resilience theory's engagement with landscape architecture. Primary literature that describes the engagement of resilience theory and landscape architecture includes the frameworks and guidelines identified by Case Study Method for Landscape Architecture (LAF 1999), Sustainable SITES Initiatives: Guidelines and Performance Benchmarks 2009 (SITES 2009), and High Performance Landscape Guidelines: 21st Century Parks for NYC (NYC Parks and Recreation, 2010). These listed frameworks and guidelines were utilized to develop social resilience guidelines that were applied to this project's case study analyses.

Transformative Resilience Theory

In 1969, Ian McHarg's Design with Nature led to fundamental changes in the practice and teaching of landscape architecture. McHarg's work presented challenges in the practice of landscape architecture. Challenges include "… the tensions between preservation and management, nature and culture, tradition and invention, theory and practice" (Conan & Spirn 2000, 97). McHarg's research inspired the research of C.S. Holling.

When Holling developed resilience theory in 1973, he was searching for a more holistic understanding of global economic, social, and evolutionary systems and their states. Holling's research challenged traditional methods that identified ecosystems as progressing in a linear movement towards a climax state. Holling's research presented resilience theory as "… systems thinking and the shift from the equilibrium view of ecological systems to a multi-scale state, non-equilibrium perspective" (Cunningham 2013, 10). Holling describes the equilibrium view of ecology as "… static and provides little insight into the transient behavior of systems that are not near the equilibrium. Natural, undisturbed systems are likely to be continually in a transient state; they will be equally so under the influence of man" (Holling 1973, 2). Resilience theory can be described as "… the amount of change a system can undergo and remain within the same regime—essentially retaining the same function, structure, and feedbacks" (Walker and Salt 2006, 164). Along with Walker and Salt, other theorists such as Gunderson have also contributed to the development of Holling's resilience theory.

In Panarchy: Understanding Transformations in Human and Natural Systems (2001), Gunderson and Holling identify various properties that affect resilience theory at multiple scales and systems. This has become known as the adaptive cycle. Gunderson and Holling explain that in the adaptive cycle, "…some of the most telling properties of ecological systems emerge from the interactions between slow-moving and fast-moving processes and between processes that have large spatial reach and processes that are relatively localized" (Gunderson and Holling 2001, 9). According to Gunderson and Holling, changes in natural systems can be forecasted and controlled; however, changes in human and ecological systems have more variables, and are thus more problematic when forecasting.

Gunderson and Holling's concept of panarchy aids in the understanding of basins of attraction. Multiple systems have the ability to influence one another. A change in a system's resilience at a smaller scale has effects on large scales' resilience, and vice

versa. The importance of system management of multiple scales is crucial in the ability to plan resiliently.

In Resilience, Adaptability, and Transformability in Social-ecological Systems, Walker et al. contribute to resilience theory as they describe systems' movement towards a stable state. In Resilience Theory: A Framework for Engaging Urban Design, Cunningham describes the position of systems in three dimensions: "latitude, resistance, and precariousness. Latitude describes the width of the basin, which is the maximum change a system can withstand without losing the ability to recover. Resistance is the depth of the basin, and represents the amount of difficulty of changing the system. Precariousness represents the current trajectory of the system and how close it is to a critical threshold between basins of attraction; the closer a system is to a threshold, the easier it is to be pushed over" (Walker et al 2004, 6; Walker and Salt 2006, 63).

Adaptive Resilience Theory

Several researchers and organizations have applied resilience theory to landscape architecture, planning, and other social-ecological research professions, including Grove (year), the Resilience Alliance and Stockholm Resilience Centre, and Waker and Salt (year).

Throughout the work of C.S. Holling, Gunderson, Walker and Salt, socio-ecological systems become the foundation for resilience theory. In Ecological and Social Linkages in Urban Design Projects: A Synthesis, Grove states "The prosperity of cities depends on the success of designers to realize and integrate ecological and social dimensions in their designs" (Grove 2013, 355). Grove identifies key modes of operation that designers utilize to integrate socio-ecological functions into their designs. Grove states, "It is hard to imagine a top-down, reductive guidebook for such an enterprise. Art and science are much too complex and dynamic. An alternative, bottom-up approach is to examine designs where the ambition is to incorporate ecology and society and consider what general lessons can be observed" (Grove 2013, 355). This bottom-up approach allows for the more holistic approach to be taken.

Agencies that have aided in development of a bottom-up approach include Resilience Alliance and Stockholm Resilience Centre. The Resilience Alliance and Stockholm Resilience Centre are research organizations that primary focus on socio-ecological functions. In Resilience in Social-Ecological Systems: Workbook for Practitioners (2010), the Resilience Alliance identifies system

dynamics, thresholds, and transitions, cross-scale interactions, interacting thresholds and cascading change, governance systems, resilience-based stewardship, and time for transformation (Resilience Alliance 2010). The resilience assessment framework is defined as "…an approach to managing natural resource systems that takes into account social and ecological influences at multiple scales, incorporates continuous change, and acknowledges a level of uncertainty has the potential to increase a system's resilience to disturbance and its' capacity to adapt to change" (Resilience Alliance 2010). The workbook identifies guidelines for assessing systems in projects for resilience; however, the workbook stops short and doesn't provide guidelines for design or their post-evaluations (See Table 2.6 for key goals and objectives).

As our world continues to evolve, so do social-ecological systems. However, how much change can these systems undergo and still deliver the services that we need from them? In Resilience Practice: Building Capacity to Absorb Disturbance and Maintain Function, Walker and Salt apply resilience to real-world situations and explore how resilient system management practices can be implemented at various scales. Throughout the various case studies in Resilient Practice, Walker and Salt describe the essence of resilience thinking preparation in practice, describing the social-ecological systems, assessing resilience, managing resilience, and practicing resilience in different ways. They offer ten key points describing resilience from thinking to practice:

• "The systems we are dealing with are self-organizing,
• there are limits to a system's self-organizing capacity,
• these systems have linked social, economic, and biophysical domains,
• self-organizing systems move through adaptive cycles,
• linked adaptive cycles function across multiple scales,
• there are three related dimensions to resilience: specified resilience, general resilience, and transformability,
• working with resilience involves both adapting and transforming,
• maintaining or building resilience comes at a cost,
• resilience is not about knowing everything,
• and resilience is not about changing. We live in a complex world. Anyone with a stake in managing some aspect of that world will benefit form a richer understanding of resilience and its implications." (Walker and Salt 2013, 3).

Responsive Resilience Theory

Through the adaptive resilience theory literature, the importance of resilience theory in urban environments hasn't been clear. It becomes necessary to follow adaptive resilience theory literature with responsive resilience theory literature. In From Fail-Safe to Safe-to-Fail: Sustainability and Resilience in the New Urban World, Ahern states, "In addition to adaptive design focused on physical urban systems, and urban biodiversity, research is needed on how to achieve greater social learning and meaningful social engagement and participation in decision-making and policy setting" (Ahern 2011, 9). In the urban environment, social interaction is of utmost value.

Ahern, a landscape architect, developed an urban design framework in response to Walker and Salt's Resilient Thinking: Sustaining Ecosystems and People in a Changing World. In From Fail-Safe to Safe-to-Fail: Sustainability and Resilience in the New Urban World, Ahern developed a framework in addition to Walker and Salt's framework to address resilience in urban landscapes. The framework provides five urban planning and design strategies. They are as follows: adaptive planning and design, multi-scale networks and connectivity, bio and spatial diversity, multi-functionality, and redundancy and modularization (Ahern 2011, 4) (See Table 2.7 for key goals and objectives).

Social interactions have been analyzed and methods have been developed. Analysis and methods of social interactions in the landscape can be seen through the case study of Joan Woodward's Envisioning Resilience in Volatile Los Angeles Landscapes. In this case study, resilience theory is applied. The case study analyzes what disruptions are causing Los Angeles to become volatile. These disruptions include water scarcity, population growth, and earthquakes (Woodward 2008). The study uses resilience theory to provide strategies for systems to maintain their functions during fragile states. Woodward states, "By creating adaptable and durable landscape treatments that carry on until the next era of abundance or reconstruction, let us shape resilient urban lands, presiding among the connected networks of corridors and native vegetation patches needed to resuscitate the region's quickly disappearing non- human inhabitants. Such plans, strategies, studies, and actions represent our important labor for the new millennium" (Woodward 2008, 109).

Walker and Salt have also used resilience theory to provide social capital strategies. In Resilience Thinking: Sustaining Ecosystems and People in a Changing World, Walker and Salt describe social capital's relationship with

resilience theory as "…strongly connected to the capacity of the people in that system to respond, together and effectively, to change and disturbance. Trust, strong networks, and leadership are all important factors in making sure this can happen" (Walker and Salt 2006, 147). Walker and Salt's framework consists of the following: diversity, ecological variability, modularity, acknowledging slow variables, tight feedbacks, social capital, innovation, ecosystem services, and overlap in governance. These variables within the framework relate to Ahern's methodology that designs should have the ability to fail safely. Through failure, designers have the ability to evaluate the problematic areas so they can be anticipated, prevented, or minimized in future designs. This methodology can be seen as early as 1978 when Holling describes the design profession as "… making decisions with imperfect knowledge about change and uncertain disturbances as an 'opportunity' to 'learn-by-doing' (Holling, 1978)" (Ahern 2011, 7).

In Resilience Theory: A Framework for Engaging Urban Design, Cunningham developed a new framework by combining Ahern's framework with Walker and Salt's framework. By combining the two frameworks, Cunningham developed a case study analysis framework. The framework provides five urban planning and design strategies similar to Ahern's. The strategies are as follows: identify and respond to critical thresholds, promote diversity, develop redundancies, create multi-scale networks and connectivity, and implement adaptive planning/management strategies (Cunningham 2013, 25). From these strategies, Cunningham developed a resilience theory framework for urban planning. The framework combines the five strategies, each sub-divided with social, ecological, economic and/or spatial strategies within a regional, metro, and/or site scale over a temporal scale. Through Cunningham's framework, he was able to identify urban planning and design strategies for application of resilience theory. The framework was then utilized in the 2013 ULI Hines competition that aided in the team's winning proposal of The Armory, Minneapolis/St. Paul, Minnesota.

Engaging Resilience Theory

Resilience theory has been widely accepted by science-based professions, such as ecology. Resilience theory has the opportunity to be applied to design professions. Linking landscape architecture theory and resilience theory literature can aid in the application of resilience theory to landscape architecture. Unfortunately, literature that supports resilience application to social systems in urban design is currently lacking. C.S. Holling, Gunderson, Walker,

and Salt have provided the base resilience theory knowledge from which to build further investigation of social ecological systems. Developing a framework that identifies and addresses how to design resiliently for social functions in urban design will allow design professionals to have a means of designing and measuring a site's resiliency.

In Civic Space in Regional Frameworks: Resilient Approaches to Urban Design, Jill Desimini identifies how landscape architects and urban designers have become accustomed to working in diverse places far from their home base. Desimini utilized this adaptable, practice approach as she analyzed two urban, civic space projects designed by Stoss Landscape Urbanism, Boston. Desimini focuses on Stoss' philosophy "… that all designed landscapes regardless of location, size and character must be conceived and positioned relative to their large-scale geographical, environmental, infrastructural and cultural systems" (Desimini 2013, 307). From this philosophy, Desimini then addressed the questions of whether the designs are multi-faceted "… how will it balance the new civic uses and social programmatic requirements with infrastructural and ecological demands?" (Desimini 2013, 308) In order for the projects to be successful, they must be resilient. Desimini states that in order for a project to be resilient, it must "… be able to withstand future political, economic and environmental shifts… it must have built-in maintenance strategies and self-regenerative mechanisms to be viable for the long-term" (Desimini 2013, 308). Desimini's case studies provide resilient approaches to urban design frameworks.

Resilience is a basis for sustainability (Resilience Alliance 2010). Sustainable Sites Initiatives developed Guidelines and Performance Benchmarks 2009 to provide landscape architects and other design professionals with a set of guidelines and benchmarks to design sustainably. The guidelines include "…criteria for sustainable land practices that will enable built landscapes to support natural ecological functions by protecting existing ecosystems and regenerating ecological capacity where it has been lost. This report focuses on measuring and rewarding a project that protects, restores and regenerates ecosystem services – benefits provided by natural ecosystems such as cleaning air and water, climate regulation and human health benefits" (SITES 2009). These guidelines and benchmarks provide a rating system to determine a site's sustainability. They do not take into consideration resilience theory.

New York City has prioritized development of their parks and has developed the High Performance Landscape Guidelines: 21st Century Parks for NYC. The guidelines

were developed in response to Michael Bloomberg's unveiling of PlaNYC, a plan to make New York America's first sustainable city where every New Yorker is within a ten-minute walk of a park (NYC Parks and Recreation 2010). "The Guidelines will ensure that NYC's parks clean our air and absorb storm water, reduce the urban heat island effect, provide habitat, and address the challenges of climate change. The manual contains hundreds of best practices including: Designing to save labor, reduce operating expenses and decrease the frequency of capital replacement" (NYC Parks and Recreation 2010). The guidelines provide an initiative effort for sustainable practices in urban spaces, and only hints at the consideration of resilience theory through its best practices.

Likewise, Landscape Architecture Foundation developed Case Study Method for Landscape Architecture. The case study was developed "… to promote an in-depth, multi-dimensional approach to case studies and provide for uniformity in format and method. By promoting this approach, LAF hopes to provide professionals and their clients with timely information on emerging issues and innovative projects, and to integrate the case study method into design education, thereby training current and future designers and policymakers with a systematic documentation and research method" (Landscape Architecture Foundation 1999). The case study method does not have guidelines for rating systems like SITES; however, it provides professionals with research methods and take-aways from case studies.

In 2013, Kansas State University graduate Kevin Cunningham provided a basis for the analysis of resilience theory in the practice of landscape architecture. Cunningham's thesis, "Resilience Theory / A Framework for Engaging Urban Design," provided a base framework for describing the "resiliency" of a project. However, the framework didn't specifically address social design implementations and how social aspects contribute to a proposal or project's resilience.

Cunningham's thesis identified social functions at a variety of scales through a resilience and analysis framework. Social functions were identified through thresholds, diversity, redundancy, connectivity, and planning at regional, metro, and site scales (See Table 2.8 for key goals and objectives). The resilience and analysis frameworks look the same; however, they are two different tools. The analysis matrix "… is a passive tool that is meant for post-design analysis. The resilience framework is an active mechanism for applying abstract and highly complex theoretical ideas to actual design tactics and methods" (Cunningham 2013, 114).

Cunningham's frameworks are holistic in nature and allow for flexibility throughout the design process. This report will add depth to the area of social systems within Cunningham's current resilience theory analysis by evaluating Cunningham's analysis and resilience framework through literature review, case studies, and a prospective design of Washington Square Park, Kansas City, in specific regards to social design. Social design implementations that this report plans to evaluate and apply include but are not limited to the following: social history of the space and its context, open space of the civic space, recreational facilities and clean air, ecological and biological effects, physical and psychological value in relationship to crowding, crime, and disease, community and neighborhood character, resource management for future generations, economic benefits, and financial incentives for adjacent developments.
By adding depth to the area of social systems within Cunningham's analysis and resilience frameworks, this report plans to increase the breadth of landscape architecture's knowledge of social resilience. This report will allow landscape architects to utilize Cunningham's analysis and resilience frameworks as a base, in addition to my social resilience guidelines to their projects. The goal of this report is to increase evidence-based design across the landscape architecture profession, through the improved awareness of resilience theory with emphasis on social systems throughout the design process.

05 Case Study Analysis

5.1 - *Français : New-York - Bryant Park* 2012
(BENOIST 2012)

Bryant Park, NYC, New York

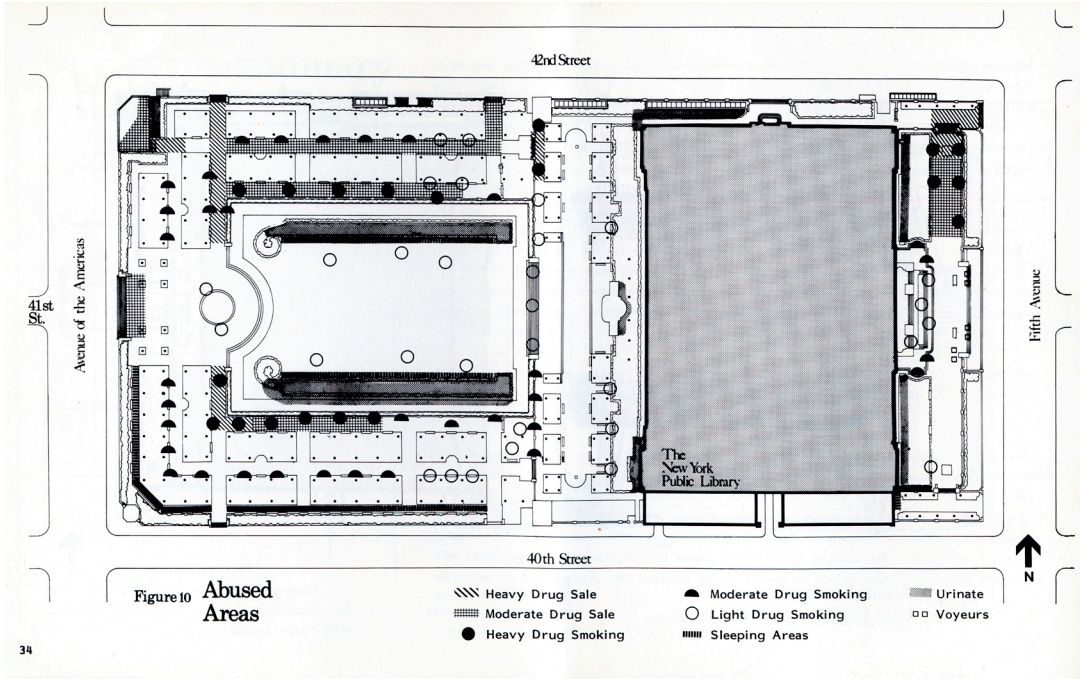
Bryant Park's evolution over time can be largely contributed to the transitions of its social environments. The park's original design allowed for people to escape the hustle and bustle of New York City as it grew in the industrial age. However, as time progressed, the park's social resilience began to decline. The park lacked proper management and maintenance and social systems transformed the park into a space home to drug activity and prostitution.

In 1979, the New York Public Library, Bryant Park's neighbor transformed the park into what it is today. New York Public Library had plans to expand the library stacks to the ground below Bryant Park. William H. Whyte, an urban planner was commissioned by the library to research human behavior in the park and suggested strategies to improve the public space. Some of Whyte's strategies suggested the removal of fences, walls and vegetation that separated the park from its' adjacencies be performed in order to improve the parks accessibility.

Between 1986 and 1991, landscape architecture firm Hanna/Olin Ltd, kiosks/ cafées architecture firm Holzman Pfeiffer Associates and library stacks architect Davis Brody Bond LLP, worked to implement some of Whyte's research into a new design of Bryant Park. Strategies of the plan that have contributed to the park's success include the following:
• increase open space for a diversity of social interactions to occur,
• provide accessibility to all ages and the handicapped,
• increase physical and visual accessibility,
• improve social sustainability of the diverse spaces,
•provide formality and organization for a diversity of events
• preserve cultural heritage of the site
• promote ecological sustainability through the green roof design
• and to create public-private partnerships to manage and maintain the site (ASLA, 2013XXXXXX).

Bryant Park's success over the last 23 years can be attributed to the park's public-private partnerships. The transformation of the park has increased the local economy, increased real estate values and promoted successful businesses. Bryant Park's transformation over time highlights the temporal scale of resilience theory and its' application to social systems. Bryant Park's has showcased its' ability to promote social resilience (MAYBE ADD IN A REFERENCE TO A MAP – depicting goals and objectives met by Bryant Park.)

5.2 - Bryant Park Location (Ragoschke, 2014)



5.3 - Social Problems in Bryant Park 1981 (OLIN, 2010)

Location

Bryant Park is a 9.6 acre park located between Fifth and Sixth Avenues and between 40th and 42nd Streets in Midtown Manhattan, New York City. The park caters to the pedestrian and has been called “the greatest public space in the world (Bryant Park.org)”.

Design

The design of Bryant Park serves the public to meet multiple goals and objectives. Goals and objectives include:

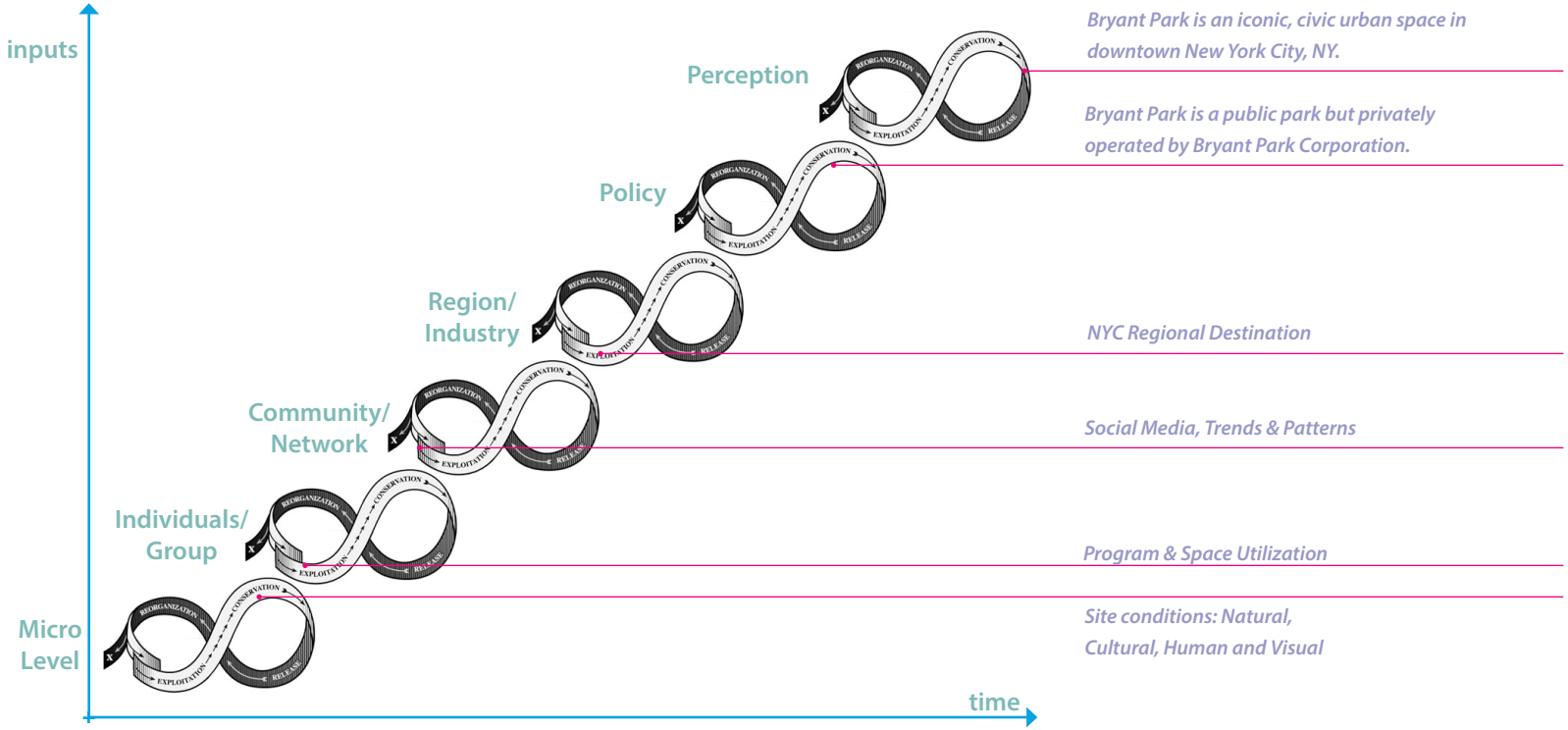
•“…to create a rich and dynamic visual, cultural and intellectual outdoor experience for New Yorkers and visitors alike,

•to enhance the real estate values of its neighbors by continuously improving the park,

•to burnish the park’s statues as a prime NYC tourist destination by presenting a meticulously maintained venue for free entertainment events,

•and to help prevent crime and disorder in the park by attracting thousands of patrons, at all hours, thus fostering a safe environment” (Bryant Park.org, 2013).

Public-private partnerships are critical to the success of Bryant Park. Even through the park is part of the New York City

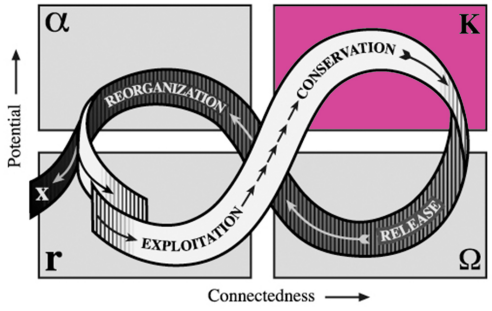


5.4 - Bryant Park Panarchy Map (Ragoschke 2014, adopted from Gunderson and Holling 2001)

Department of Parks and Recreation, the park is managed by a private non-profit corporation, the Bryant Park Corporation (BPC). BPC manages the park by providing security services, restrooms, and gardens with seasonal plantings, sanitation, and lawn maintenance. BPC also collaborated with civic organizations and park patrons to offer additional amenities to the park and free professional entertainment to the park (Bryant Park.org, 2013). BPC constantly looks at other park models and new innovations to keep the park resilient.

Panarchy Map

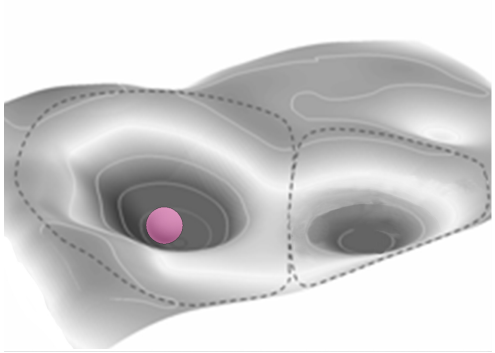
The panarchy map depicts some possible social activities that can occur in a temporal scale in Bryant Park's urban context. Identification of these social activities and how they interact at multiple scales and different spaces is crucial in a site design that strives to exhibit social resilience.



5.5 (Left) - Bryant Park Adaptive Cycle Position (Ragoschke 2014, adopted from Gunderson and Holling 2001)
5.6 (Middle) - Bryant Park Basin of Attraction (Ragoschke 2014, adopted from Walker et al. n.d. "Ecology and Society")
5.7 (Far Right) - Bryant Park: Intimidation or Recreation? 1981, by Project for Public Spaces, Inc. (ASLA, 2010)

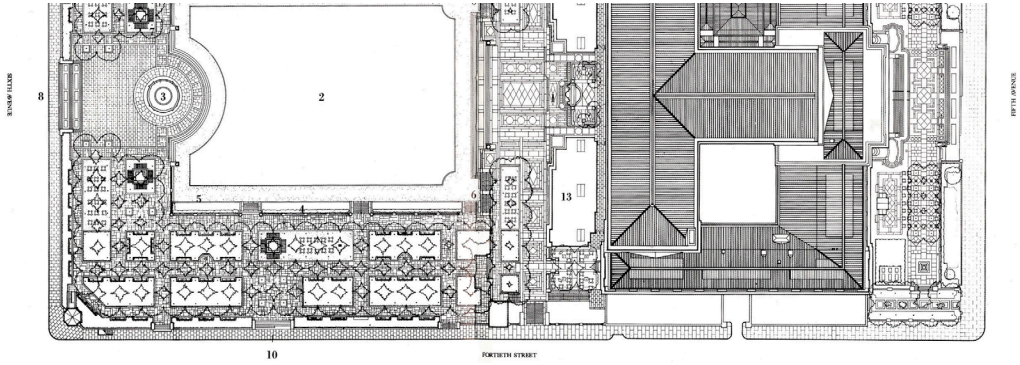
Adaptive Cycle Position

Bryant Park is currently in the midst of its conservation stage in regards to its social systems. Since 1686, Bryant Park has been designated as public space (Bryant Park.org, 2013). The park has undergone several design changes since 1686. In 1847, Reservoir Square, the first park was opened on the site. In 1853, the Exhibition of the Industry of All Nations in association with New York Crystal Palace, adjacent to Reservoir Square brought thousands of exhibitors to the park (Bryant Park.org, 2013). In 1884, the park was renamed Bryant Park after New York Evening Post editor William C. Bryant. In 1899, the Reservoir structure adjacent to the park was removed and the construction of New York City Library which borders the east entrance to the park began. In 1933 the park was redesigned by urban planner, Robert Moses. The park called for attention since the construction of the Sixth Avenue Elevated railway in 1878 created negative impressions and shadows on the park. Moses redesigned the park with a great lawn, hedges and iron fences that separated the park form the surround areas. Over the next century, the park has undergone more neglect from deconstruction of the elevated railway and the construction of subway line below. By the 1970's Bryant Park was considered a derelict place. The park was home to the homeless, drugs, prostitution, and crime. By 1986, a group of prominent New Yorker's formed The Bryant Park Restoration Corporation and commissioned Hanna/Olin Ltd and Hardy Holzman Pfeiffer Associates to re-design Bryant Park. Since the re-design of Bryant Park in 1988, the urban park has had tremendous success and reviews as being a successful urban design. New York Times has described the transition of the park as "…the park was the home of derelicts, drug dealers and drug users, it is now awash with office workers, shoppers, strollers and readers from the New York Public Library next door" (Bryant Park.org, 2013) (Try and find original source.). The park continues to promote social resilience with the management of the BPC.



Basin of Attraction

Bryant Park has continuously moved between basins of attraction as the park has been redesigned. Bryant Park is currently is strongly balanced in its' current basin of attraction. BPC's ability to maintain the park as the urban environment around the park continuously changes has proven the parks ability to maintain social resilience. Bryant Park is a great example of how larger scale's resilience influences smaller scale's resilience and visa-versa. Goals and objectives of Bryant Park have changed since its' original design in 1847; however, commonality in the goals and objectives promotion of social resilience in Midtown Manhattan, New York City is evident.



Master Plan

Bryant Park has been developed multiple times as explained throughout the adaptive cycle position. The most recent change occurred in 1980's. In the 1986 the design of Bryant Park underwent a critical change, as the New York Public Library excavated the park and created library stacks beneath the park. The park was restored and now the 9.6 acre park is located above the underground library stacks. Bryant Park's design is iconic both above and below ground.

Between 1986 and 1991, Hanna/Olin Ltd and Hardy Holzman Pfeiffer Associates redeveloped Bryant Park. Since the redevelopment, Bryant Park has received numerous awards for the success of its' public space. Awards include the following: Best of Design (Time Magazine, 1992), Excellence in Urban Design (American Institute of Architects, 1993), Best of New York – Urban Renewal (New York Magazine, 1993), Merit Award (American Society of Landscape Architects, 1994), Big Apple Award (City of New York, 1994), and Award of Excellence for Public Projects (Urban Landscape Institute, 1996). Bryant Park has been widely accepted as a model for urban parks environmental, social and economic sustainability. Daily attendance at Bryant Park exceeds 800 people per acre, accounting for approximately 7,200 people per day, making the Bryant Park the most densely occupied urban park in the world (Travel New York City, 2006).

The design of Bryant Park allowed for activity to occur throughout the seasons. Social and economic systems in and around Bryant Park provide resilience to the park. Concerts, performances, movies, ice skating, napping, breakfast/lunch/dinners, ping pong, chess, checkers, Le Carrousel, and much more within Bryant Park, accommodated by the park's design. The success of Bryant Park can be attributed to its' public/private partnership, which can now be seen as a model for success of urban, public spaces and facilitation of social interactions.

5.8 - Lunch in Klyde Warren Park (Ragoschke, 2013)

Klyde Warren Park, Dallas, TX

Klyde Warren Park is a 21st century urban civic space designed on an elevated deck above Woodall Rodgers Freeway in Dallas, Texas. Analysis of social resilience was based on the park's ability to address social capital to its' fullest potential. Klyde Warren Park was established to bridge connections with downtown districts in Dallas, Texas.

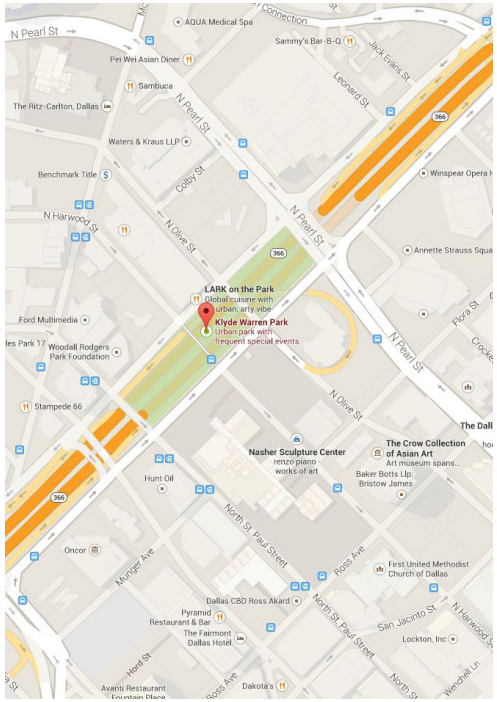
"Connectivity was an important consideration when Klyde Warren Park was built. Easily accessible by foot, trolley and bicycle from Uptown, Downtown and the Arts District, the park contributes to a more walkable city center" (Klyde Warren Park.org 2013).

Since the park was designed to promote connections, emphasis was placed on socio-economic capital rather than socio-ecological capitals. There was several design strategies that were utilized to capitalize upon socio-economic capitals involved with the park: covering Woodall Rodgers Freeway with an iconic deck park, connect to nearby economic bases, and provide outdoor recreation for residents and visitors. In terms of resilience, Klyde Warren Park places importance on the site and metro scale, thresholds, diversity, connectivity and planning. A lesser focuses is placed on regional scale, creating redundancies. The master plan of Klyde Warren Park addresses social and economic issues with limited emphasis placed on ecological strategies.

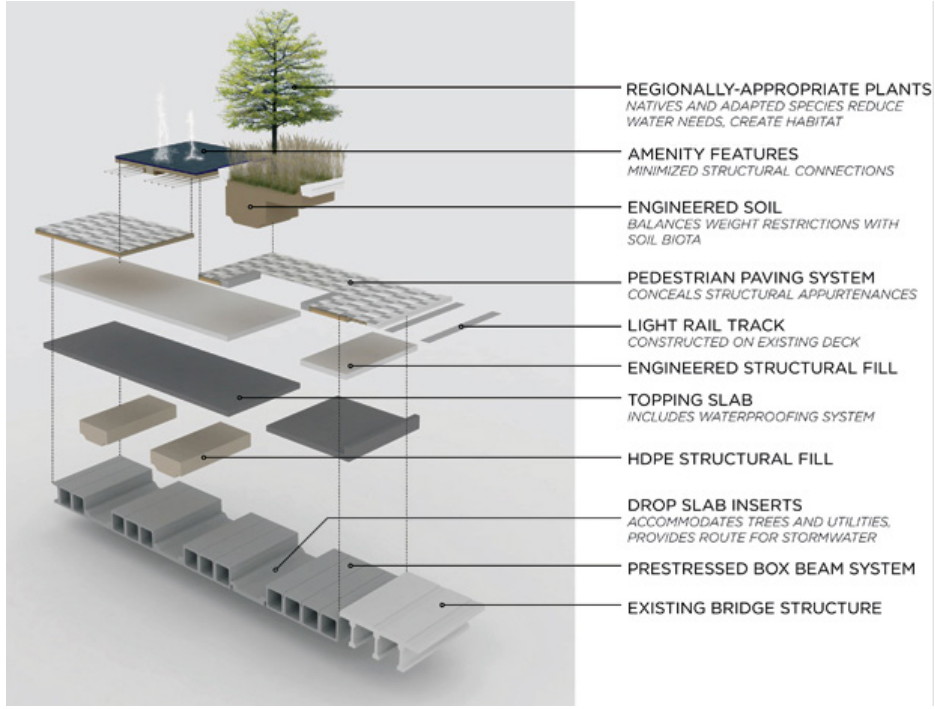
Klyde Warren Park is a site-oriented design that addressed many social goals and objectives that this report identifies with resilience theory. The main objective of the project was to create a stronger pedestrian connection between districts in downtown Dallas. Socio-economic diversity and connectivity was important as the park sought out to connect neighboring districts that were separated by Woodall Rodgers Freeway. Metro connections are established through the connection to the Dallas trolley system on St. Paul Street and Woodall Rodgers Freeway below. Limited regional connections are referred to in the project. Klyde Warren Park's iconic position above Woodall Rodgers Freeway allows the park to act as a symbol of identity of the downtown District as its' unique architecture promotes social memory.

Klyde Warren Park exemplifies diversity in open space and pedestrian connectivity with diversity in adjacent economic land use and building types. The diversity created within the park and its' adjacencies create redundancies in the phasing strategies when connecting to Dallas' larger park system. Klyde Warren Park exemplifies the theories aspect that small scales have impact on the larger scales resilience. Site scale goals and objectives such as its' ability to provide diverse activities that cater to the diverse surroundings creates resilience at the site scale as well as the regional scale as an important socio-cultural identity within the Dallas/ Fort Worth area as a destination in downtown Dallas. By creating resilience at the site scale, the exploitation phase becomes stronger and more resilient to change at metro and regional scales.

Klyde Warren Park was created to improve pedestrian connections. The network of pedestrian connections across multiple scales increases social resilience. Districts are better connected through pedestrian activity, increasing social diversity. Klyde Warren Park exemplifies exceptional social resilience through its design for pedestrian connection across districts. However, the design lacks goals and strategies that address regional systems.



5.9 - Klyde Warren Location (Ragoschke, 2014)



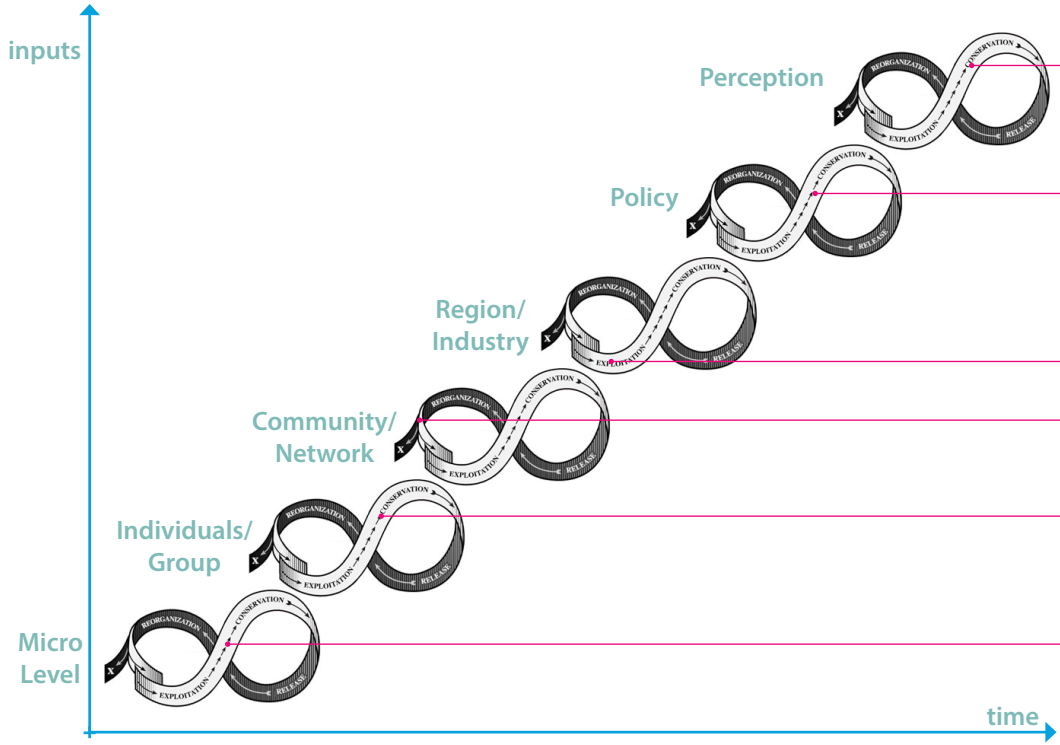
5.10 - Klyde Warren Park Design (Burnett, 2014)

Location

Klyde Warren Park is located in downtown Dallas, between the Central Business District and the Arts District. The park was recently built over three city blocks of the Woodall Rodgers Freeway. The park caters to the pedestrian above and vehicle below, promoting more social activity between districts that were once separated in downtown Dallas.

Design

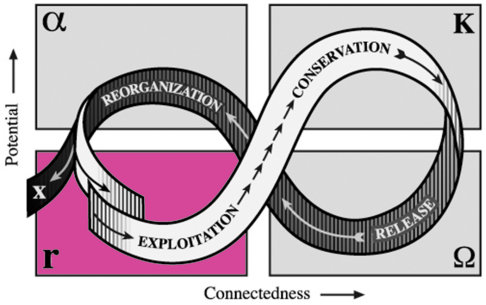
There were several submissions for the Klyde Warren Park master plan. The master plan that was chosen exemplified improved pedestrian connections between the Downtown District, Arts District and Uptown District. Connections within and outside of the park can be seen at multiple scales. Since the park is situated above Woodall Rodger's Freeway, vehicular access is observed from multiple perspectives. Connections within the park build upon the connections between districts that were once separated by the freeway below.

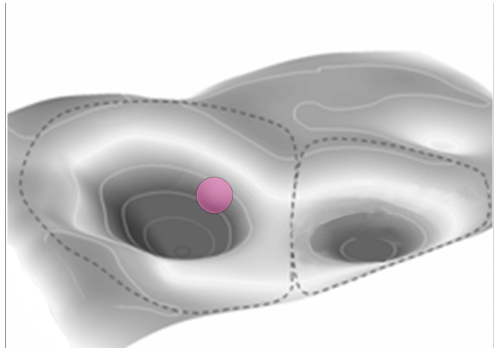


5.11 - Klyde Warren Panarchy Map (Ragoschke 2014, adopted from Gunderson and Holling 2001)

Panarchy Map

The panarchy map depicts some possible social activities that occur in a temporal scale in urban landscapes. It is important to identify how social activities interact at multiple scales and spaces in order to have a site design that is cognizant of its context.





5.12 (Left) - Klyde Warren Adaptive Cycle Position (Ragoschke 2014, adopted from Gunderson and Holling 2001)
5.13 (Middle) - Klyde Warren Basin of Attraction (Ragoschke 2014, adopted from Walker et al. n.d. "Ecology and Society")
5.14 (Far Right) - Master Plan (Burnett, 2014)

Adaptive Cycle Position

Klyde Warren Park is currently at the end of the exploitation or rapid growth phase in regards to its' social systems. The park was developed to enhance the pedestrian connection between the Downtown District, Arts District and Uptown District. Since the park's completion, several apartment complexes and residential high-rises have been developed to capitalize upon the park's development. Pedestrian connections have been greatly improved and many people utilize the park on a daily basis. Adjacent restaurants and food trucks that visit the park daily provide food for business workers. The open lawn provides areas for sports to be played. Many activities occur within the park that weren't available when Woodall Rodger's Freeway separated the districts.

Basin of Attraction

The current basin of attraction at Klyde Warren Park has currently moved from its' pre-existing basin where Woodall Rodgers Freeway separated districts in downtown Dallas to a basin where Klyde Warren Park's development over the freeway has provided a new basin of attraction. The prior basin allowed for vehicular resilience, but lacked social resilience at multiple scales. The development of the park above the freeway provided a new basin of attraction that retained the vehicular resilience below and promoted social resilience above.

Master Plan

The Office of James Burnett developed the master plan for Klyde Warren Park. The office designed the 5.2 acre park as an important pedestrian connection between the Central Business District, Uptown and Arts District in downtown Dallas. The master plan of the park connects three city blocks above Woodall Rodgers Freeway and is bisected by Olive Street. The park consists of several pedestrian promenades that are lines with a Pond Cypress for canopy / shade. The park's promenades begin at the southwestern corner of the park. Along the promenade, visitors can enjoy the botanical garden, children's garden, event lawn or reading room as the promenade takes them to the large pedestrian pavilion. The pavilion is situated on the Olive Street's intersection, connecting the restaurant terrace, performance and casual take-out pavilions to the districts on each side of the park. The pedestrian promenade continues across Olive Street where visitors can enjoy more plazas and garden spaces.

As the pedestrian promenade continues, visitors can enjoy intimate garden spaces, a dog park, or the interactive water feature that concludes the promenade at Pearl Street. The park's spaces are buffered from the adjacent vehicular access or Woodall Rodgers Freeway through vegetation and landscaping strategies.

Military Park, Newark, NJ

In 2003, Biederman Redevelopment Ventures (BRV) need to have in glossary was selected to make recommendations for the redesign and programming of the Military Park. BRV submitted an analysis of park, design and program recommendations, expenses and revenue costs associated with the new design, and phasing strategies.

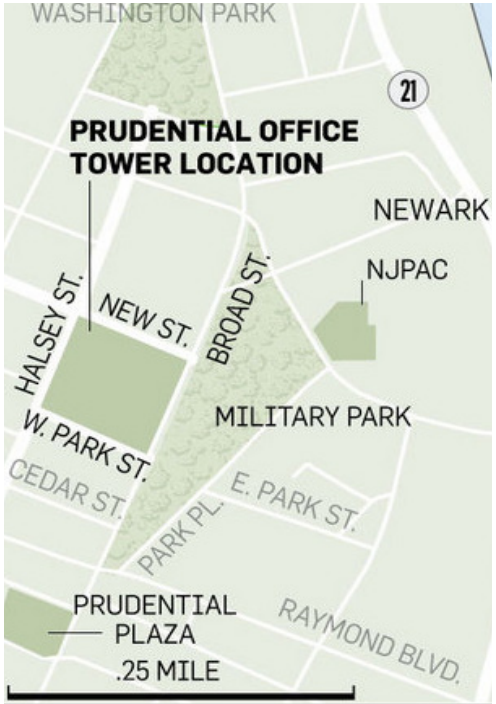
In 2010, after 7 years of planning, BRV began implementing the changes. The first change that was of urgency was the creation of a public-private partnership between MCJ-Amelior Foundation and the City of Newark, Military Park Partnership. This non-profit organization would oversee future the redevelopment and operations of Military Park's revitalized future (BRV, 2013).

Since Military Park's establishment in 1667, the park has transitioned with the city from a colonial settlement to an industrial powerhouse to a symbol of urban decay (Foderaro, 2013). Military Park began its' $3.25 million renovation in the spring of 2013. Plans for the park include the removable of unhealthy trees, new gardens with approximately one acre dedicated to flowers, a new café and restrooms, repair lampposts, create new seating areas, install custom trash receptacles, and new programs and recreational activities for park users (Foderaro, 2013).

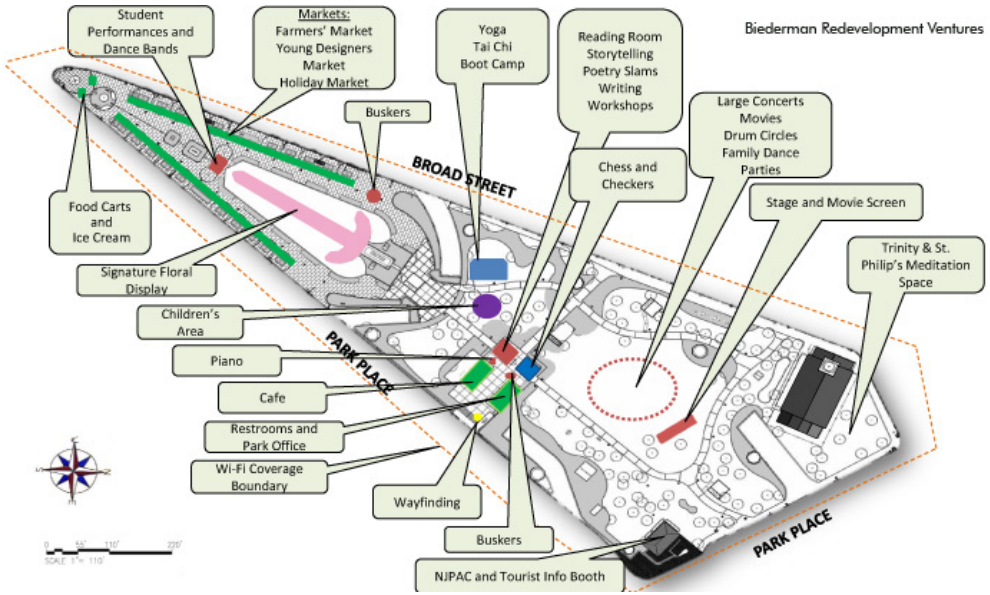
Newark's Mayor, Cory A. Booker, has identified Newark's lack of parks for the people. Booker has already invested over $20 million in investments for over 40 acres of parkland in Newark, New Jersey. Military Park has been identified as the main focus of Newark's downtown parks. The park is bordered by Rector Street, Broad Street and Rector Street. Military Park has a prime location, situated a few blocks away from the central business district. Major businesses have also planned on investing in the park's adjacencies. Prudential Insurance's world headquarters is located two blocks south of the park. Plans are in progress to situate a $440 million office building adjacent to the park. In addition to office expansion in the area, Panasonic's North American headquarters is under construction a block away from the park. In 1997 Theater Square Development opened the Newark Arts Center opened adjacent to the park. Theater Square Development has plans to construct a residential building adjacent to the park in the near future.

The main goal for Military Park is that the park be self-sustaining, modeled after Bryant Park. Military Park will generate income from the concessions, nearby office buildings and corporate sponsorships. In order for Military Park to become self-sustaining, there needs to be a constant influx of people who utilize the space. Programs like chess, yoga classes, lectures, concerts and movies will create activity within the park. However, in order to bring people to that park, there needs to be a population of people around the park.

However, until plans for the park and adjacent areas are complete, the park will not be able to perform at expectations. Biederman Redevelopment Ventures has identified a public-private partnership, Military Park Partnership to oversee the park's redevelopment to ensure the park will be self-sustaining. The partnership includes: Newark City, MCJ Amelior Foundation and Theater Square Development Corporation. Newark Mayor Booker said, "With new office towers on the way from Prudential and Panasonic, and new residents moving downtown, a revitalized Military Park will be the central community public space" (Foderaro, 2013).



5.16 - Location of Military Park (Sparvero, 2012)



5.17 - Site Analysis (Biederman Redevelopment Ventures, 2014)

Location

Military Park is bordered by Rector Street, Broad Street and Park Place. Military Park has a prime location in downtown Newark, situated a few blocks away from the central business district.

Design

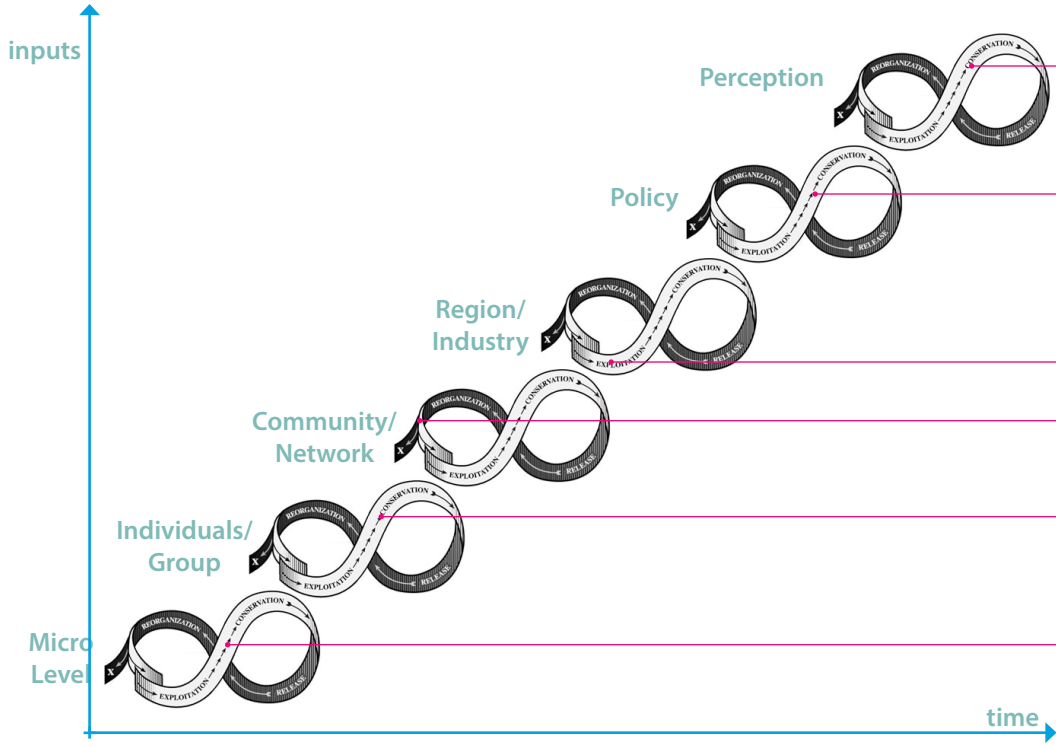
The design of Military Park serves the public to meet multiple goals and objectives. The design of Military Park serves the public to meet multiple goals and objectives. Goals and objectives include:

• be self-sustaining, modeled after Bryant Park.

• generate income form concessions, nearby office buildings and corporate sponsorships

• retain cultural identity, assets include the war monument "Wars of America" designed by Mount Rushmore creator Gutzon Borglum and a bust of President John F. Kennedy designed by Jacques Lipchitz.

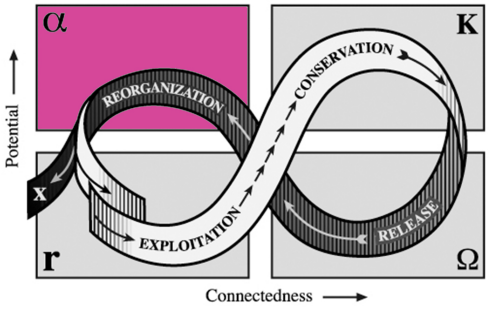
• create outdoor spaces with programs that attract office workers and residents at all hours of the day help prevent crime and disorder in the park, thus reducing the crime rates in downtown Newark.

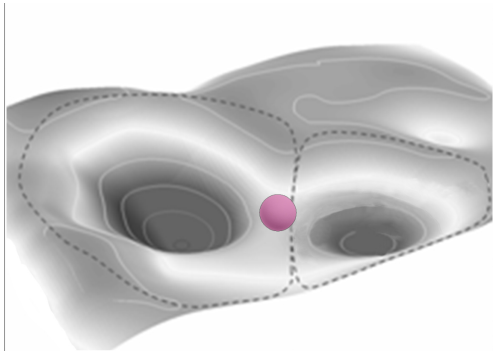


5.18 - Military Park Panarchy Map (Ragoschke 2014, adopted from Gunderson and Holling 2001)

Panarchy Map

The panarchy map depicts some possible social activities that can occur in a temporal scale in Military Park's urban context. Identification of these social activities and how they interact at multiple scales and different spaces is crucial in a site design that strives to exhibit social resilience.





5.19 (Left) - Military Park Adaptive Cycle Position (Ragoschke 2014, adopted from Gunderson and Holling 2001)
5.20 (Middle) - Military Park Basin of Attraction (Ragoschke 2014, adopted from Walker et al. n.d. "Ecology and Society")
5.21 (Far Right) - Military Park Master Plan (Biederman, 2014)

Adaptive Cycle Position

Military Park is currently in the midst of its reorganization state in regards to its social systems. Since 1667, the park has undergone many changes. For nearly 200 years, the park was training grounds for soldiers. In 1869, what is believed to be the first public electric lights in America were revealed at Military Park's location. This marked the transition of the grounds being transformed from a training ground for soldiers into Newark's town commons. Over time the park has transitioned with the city from a colonial settlement to an industrial powerhouse to a symbol of urban decay. In the spring of 2013, Military Park began its' $3.25 million dollar renovation in hopes to create a self-sustaining park for the future of Newark. This renovation to the park aims to bring Military Park's social systems out of a very long release phase and bring social equity back to the site.

Basin of Attraction

Military Park is currently in a basin transitioning between basins. Military Park's old basin of attraction did not exhibit social resilience. The park's context and high crime rates limited the number of people in Military Park. Plans for reorganization of the site and its' context brings hope to the optimistic park. Plans for new businesses, residents and private-public partnerships hopes to transition the park into a new basin of attraction that will be socially resilient.

Master Plan

Military Park is undergoing major renovations; renovations recognize opportunities of its cultural identity. Renovations include the following:

- removable of unhealthy trees,
- new gardens with approximately one acre dedicated to flowers,
- a new café and restrooms,
- repair lampposts,
- create new seating areas,
- install custom trash receptacles,
- and create new programs and recreational activities for park users (Foderaro, 2013).

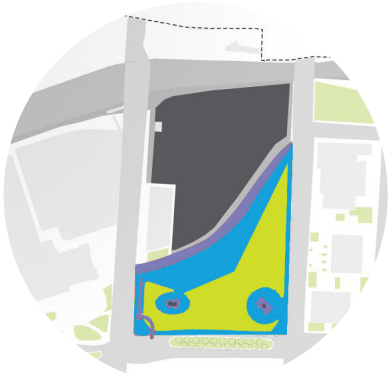
Through the renovations, Military Park hopes to create a unique sense of place and promote social adaptivity that improves the current health, welfare and safety of the general public. As Military Park's adjacencies change with new businesses and residencies, a new influx of people will be brought to the park. Designing for change hopes to promote not only social capital, but economic capital as well.

06 PROJECTIVE DESIGN / WASHINGTON SQUARE PARK

PART 1 - GOALS

GOAL 1

Focus on the park's long-term social resilience



analysis

6.1 - SPACE TYPOLOGIES

- *Permanent*
- *Semi-flexible*
- *Flexible*
- *Parking lot*

case study

6.2 - Bryant Park above NYC Public Library Stacks (ASLA, 2014)

strategy

6.3 - SPACE TYPOLOGIES

- *Permanent*
- *Semi-flexible*
- *Flexible*

Site Analysis

Disconnected from Crossroads District because of topography.

Crown Center District/ Union Station

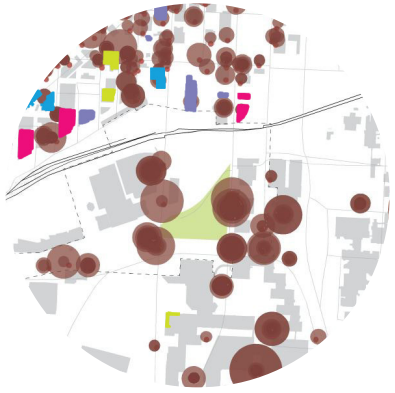
Large surface parking lot north of Washington Square Park has the opportunity to be transformed to reduce urban heat island effect.

Washington Square Park currently lacks effective connections to adjacent districts.

Antisicipate the proposed Main Street Streetcar along Main and Pershing Road.

Washington Square Park has a prime location in downtown Kansas City with opportunities to expand and promote development in the Crossroads District.

Case Study / Relience Theory	Objective	Strategy
Bryant Park's green roof over NYC Library Stacks / R.T. Sustainability	Provide visions for ordered urban, civic spaces that will improve downtown Kansas City's functional and spatial relationships (KCDC, 2012).	***Address topography change with a multi-functional parking garage that allows for parking, housing and a rooftop park.***
Bryant Park's connections to NYC business' / R.T. Multiple Scale Interactions	Program the park for an array of users and activity (KCDC, 2012).	Provide connections to adjacent businesses & Union Station.
Bryant Park green roof over NYC Library Stacks / R.T. Providing ecological benefits.	Cap northern surface parking lot to reduce urban heat island effect and provide underground parking that still serves Union Station (KCDC, 2012).	***Create a parking garage with a green roof that serves Union Station and provides residential parking, as well as reduces the urban heat island effect.***
Bryant Park connects to adjacencies and larger context with NYC subway system and bus stops. / R.T. Multiple scales have affects on one another.	Rethink, reconsider, and re-envision Kansas City's downtown green and civic spaces and their relationships with one another (KCDC, 2012).	Connect Washington Square Park to adjacent districts through Main Street Streetcar and Making Grand "Grand" Plans.
Klyde Warren Park connects to Dallas Trolley system. / R.T. Connections to multiple systems at multiple scales.	Program the park to capitalize upon the streetcar plan, Making Grand "Grand" Plan, and Union Station and Bike Sharing programs (KCDC, 2012).	Create connections to Main Street Streetcar, Grand Street and the Bike Sharing program within Washington Square park at designated areas.
Klyde Warren Park promoted residential development in the Arts and Uptown Districts of Dallas / R.T. Basin of attraction's resilience as moved into a new basin of attraction that is more stable than its' previous basin.	Act as an agent to generate qualitative change and development in downtown Kansas City (KCDC, 2012).	***Expand Washington Square Park to the Crossroads District to promote development such as mixed-use and residential.***

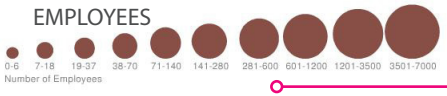


analysis

6.4 - RESIDENTS

- *1-10 residents*
- *11-50 residents*
- *101-200 residents*
- *201+ residents*

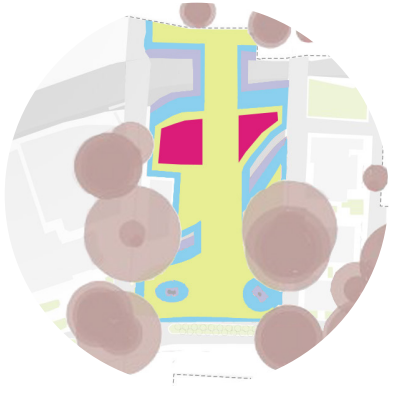
EMPLOYEES



case study

6.5 - CORPORATE NEIGHBORS

1. *Baker & McKenzie*
2. *Bank of America*
7. *CIT Group*
14. *HBO*
17. *MetLife*



strategy

6.6 - RESIDENCIES

- *Potential New Residencies*
- *Permanent*
- *Semi-flexible*
- *Flexible*

Site Analysis

Creative arts district, Crossroads District is fostering innovative, sustainable designs.

Excellent tree canopy and lawn exists within the park.

Opportunity to better manage stormwater and mitigate urban “heat island” by extending the park north over the existing large surface parking lot.

Current site conditions do not allow for residential development.

Local businesses are centrally located downtown, but lack access to transportation and cultural amentities.

Washington Square Park has been issued an RFQ/P for redevelopment plans.

The park’s history within Kansas City has allowed it to maintain its size and identity within downtown Kansas City.

Case Study / Relience Theory	Objective	Strategy
Klyde Warren Park's innovative, sustainable design over Woodall Rodger's Freeway connecting districts / R.T. Connections at multiple scales.	Promote Sustainability by: use sustainable practices to guide policy recommendations and development decisions (City of Kansas City, Missouri, 12, 2011).	Create a stronger connection to the Crossroads District by extending Washington Square Park to the Crossroads District.
Bryant Park's mixed use: park and green roof, library stacks below. Klyde Warren Park mixed use: park over Woodall Rodger's Freeway	Promote Sustainability by: enhance existing infrastructure and utilize new development as a means to improve air and water quality (City of Kansas City, Missouri, 12, 2011).	Enlarge the park to the rails north of the site with more ecological features to improve air and water quality that is currently generated by the surface parking lot.
Bryant Park green roof over NYC Library Stacks / R.T. Sustainability	Promote Sustainability by: manage stormwater and mitigate urban "heat island" (City of Kansas City, Missouri, 12, 2011).	Create a green roof parking garage over the existing surface parking lot.
All case studies have promoted residential growth and business development. / R.T. Social connections across scales.	Advance the goal of doubling the population and increasing employment by attracting and/ or retaining residents and businesses (City of Kansas City, Missouri, 12, 2011).	***Connect with the park's adjacencies by developing residential and mixed-use development near the Crossroads District.***
All case studies connect to transportation and cultural amentities. Bryant Park is blocks away from Times Square NYC. / R.T. Social connections across scales and time.	Attract new businesses and foster development by leveraging the unique qualities of downtown; geographic center and access to transportation and cultural amenities (City of Kansas City, Missouri, 12, 2011).	Provide connections points within the park that connect to transportation routes such as the Bike Sharing program, Union Station and the anticipated Main Street streetcar.
All case studies cater to the success of their surroundings. / R.T. Socio-ecological relationships.	Create a proactive economic development strategy which is outcome oriented (City of Kansas City, Missouri, 12, 2011).	***Utilize the park as a catalyst for future developments and economic revenue.***
All case studies had input from Beiderman Redevelopment Ventures when they were redeveloped or developed. / R.T. To maintain resilience, change must be antiscipated.	Pursue focused and targeted approaches and finish what we've already started (City of Kansas City, Missouri, 12, 2011).	Connect to plans for Main Street Streetcar and Making Grand "Grand".

analysis

6.7 - INFLUENTIAL LAND USE

- *Single-Family Residential*
- *Multi-Family Residential*
- *Parking*
- *Industrial*
- *Vacancies*
- *Retail/Commercial*
- *Public/ Institutional*
- *Government*

Site Analysis

Currently Washington Square Park is maintained by the City of Kansas City and lacks proper funding.

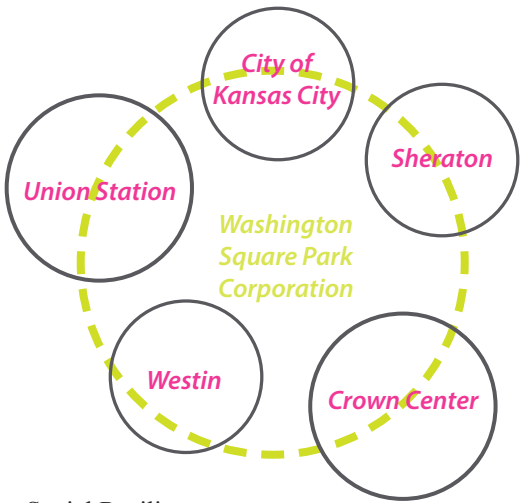
N/A

Kansas City Parks and Recreation Department has identified Washington Square Park as a park with opportunity for change.

case study

6.8 - Redevelopment Correlations
All case studies were analyzed by Biederman Redevelopment Ventures prior to their development or redevelopments in order to generate private-public partnerships with adjacenent businesses.

Washinton Square Park RFQ/P identifies goals and objectives of the businesses and communities surveyed.



strategy

6.9 - Private-Public Partnership
Generate a private-public partnership between City of Kansas City & surrounding businesses, such as Union Station, Sheraton, Crown Center and Westin.

N/A - Programmatic

N/A - Programmatic

Case Study / Relience Theory	Objective	Strategy
All case studies have private-public partnerships that contribute to their funding and continued success/ / R.T. Non-physical system connections.	Create new tools, policies and procedures (City of Kansas City, Missouri, 12, 2011).	***Create a private-public partnership with the City of Kansas City and the surrounding businesses to maintain Washington Square Park.***
Bryant Park and Klyde Warren Park provide workshops, lectures and tours to educate the public of the design. / R.T. Public-private partnerships allow spaces to interact independent of one source of income.	Promote sustainable awareness and education (Sustainable Sites Initiative, 2009).	Create signage that identifies programmatic elements to educate the public of nature, people and place interactions.
Beiderman Redevelopment Ventures analysis of existing plans prior to their proposals. / R.T. System interactions - Public-private relationships.	Collaboration and Participation by: Encourage direct and open communication between Park's department and other agencies (NYC Parks and Recreation 2010).	***Integrate social resilience aspects of the 5 plans geared toward change of Washington Square Park; GDAP, Washington Square Park RFQ/P, Making Grand "Grand", Main Street Streetcar Plan and KCDC's Plan for Washington Square Park.***
Consultants providing community workshops to ensure the public's knowledge and recreational goals are acknowledged. / R.T. Collaboration of stakeholders.	Collaboration and Participation by: Engage the public in the consulting process so their knowledge and recreational goals are in the design (NYC Parks and Recreation 2010).	Incorporate goals and objectives identified from Washington Square Park's RFQ/P into projective design of Washington Square Park.
Public-private partnerships contribute invaluable interest from the community. / R.T. People work together to accomplish common goals.	Collaboration and Participation by: Aid in the development of community stewardship (NYC Parks and Recreation 2010).	Spark the community's interest through a new, redeveloped park generating social memory and care. Develop maintenance objectives to guide the future success of the park.
Klyde Warren and Bryant Park begin to educate the public with signage about their ecological benefits through signage. / R.T. Integrations of resilience across socio-ecological systems.	Education by: Designs should educate the public of the ecological benefits of urban parks (NYC Parks and Recreation 2010).	Create signage that educates the public of the programmatic elements.

analysis

6.10 - Viewshed of Downtown Kansas City Skyline - Washington Square Park has iconic views of downtown Kansas City's skyline.

case study

6.11 - Views of Bryant Park, NYC.
Bryant Park has iconic views of New York City's skyline both within and without of the park (OLIN, 2014).

strategy

6.12 - Iconic Views Preserved
Maintain iconic downtown views while generating mixed-use development over the northern parking lot to link Washington Square Park with the Crossroads District (Ragoschke, 2014).

Site Analysis

N/A

N/A

Washington Square Park currently lacks effective programing and regenerative systems. The park is currently in its' conservation stage.

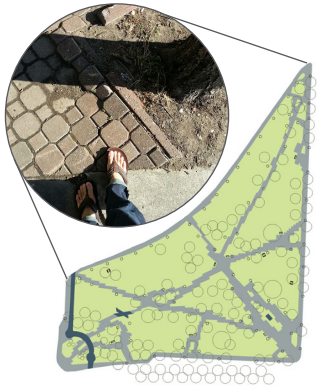
Washington Square Park provides maximum for its' site but opportunity to expand exists.

Currently Washington Square Park's urban context prevents the park from much utilization. Much of the park's utilization comes from the adjacent businesses and occassional events.

Case Study / Relience Theory	Objective	Strategy
N/A / R.T. Maintain one basin of attraction as long as possible by educating the public of urban park's importance (perception).	Education by: Educate future generations the importance of having urban parks (NYC Parks and Recreation 2010).	***Generate social memory in order to develop positive perceptions of urban, civic space.***
N/A / R.T. Maintain one basin of attraction as long as possible by educating the public of urban park's importance (perception).	Education by: Educate future generations the importance of having urban parks (NYC Parks and Recreation 2010).	***Generate social memory in order to develop positive perceptions of urban, civic space.***
Klyde Warren Park and its native habitats. / R.T. Ecological Responsibility	Provide future generations with sustainable urban parks aided by regenerative systems (NYC Parks and Recreation 2010).	Provide healthy habitat for a wide variety of plants and wildlife becoming an urban model of responsible horticulture. Controlled rooftop gardening above the parking garage.
Klyde Warren Park and Bryant Park both reduce resources that contribute to global warming, such as vehicular means of transportation. / R.T. Ability to adapt over time and remain in a stable state.	Disregard resources that contribute to global warming or habitat degradation (NYC Parks and Recreation 2010).	Expand Washington Square Park north of the rail right-of-way providing more areas for greenspace than current conditions.
All case studies have aimed to improve the health and welfare of the residents/ visitors. Bryant Park has shown to be successful improving the health and welfare of its residents/ visitors. Military Park is currently being redeveloped and Klyde Warren Park is relatively new and has showcased its' success over Woodall Rodgers Freeway. / R.T. Multiple scales and systems relationship to one another.	Public Health by: Encourage activity that improves the health and welfare of the residents/ visitors (NYC Parks and Recreation 2010).	***Create residential and mixed-use development along the park's expanded, shared perimeter with the Crossroads District.***

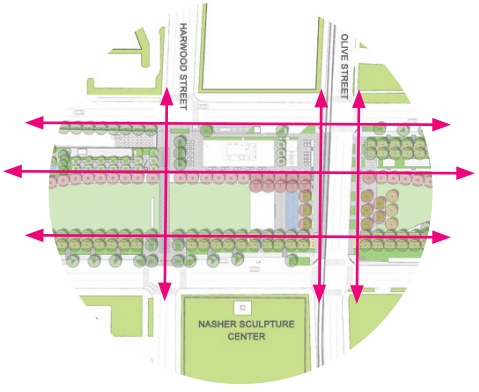
GOAL 2

Provide a diverse array of elements and activities.



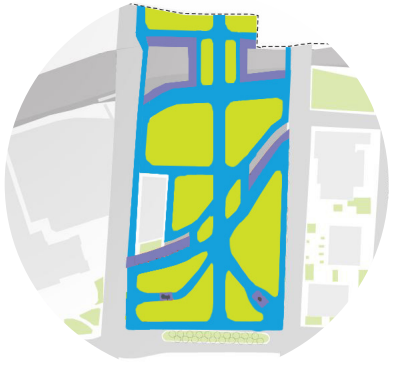
analysis

6.13 - Missed Connections
The sidewalks at Washington Square Park are becoming uneven and hazardous to pedestrians.



case study

6.14 - Connecting Districts - Klyde Warren Park
Klyde Warren Park provides multiple pedestrian connections across Woodall Rodgers Freeway., linking adjacent districts (OJB, 2014).



strategy

6.15 - PEDESTRIAN ACCESSIBILITY

- *Permeable*
- *Semi-permeable*
- *Non-permeable*

Site Analysis

Outdoor spaces are undefined and open for intrepretation.

Outdates lighting is currently being utilized. The park is underlite during night-time hours.

The network of sidewalks within the park limit the pedestrian from the amount of physical activity that can be performed.

The width of Grand Street separates Washington Square Park from adjacent businesses.

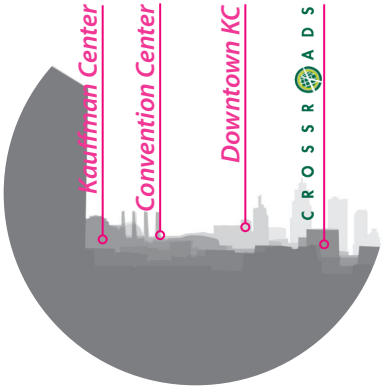
Between the Central Business District and Crown Center, Washington Square Park and a small urban park by the Kansas City Star are the only two parks along Grand Street.

Washington Square Park consists of a large lawn with trees spread throughout the lawn. Recreational space is no identified.

Case Study / Relience Theory	Objective	Strategy
All case studies provide outdoor spaces for social interation. / R.T. Bridging indoor and outdoor interactions within the environment.	Provide outdoor spaces for social interaction (Sustainable Sites Initiative, 2009).	***Create spaces that have definition defined by the landscape and architecture.***
Military Park's current redevelopment is addressing the light pollution with the installation of LED lighting while maintaining the existing lighting fixtures. / R.T. To remain within the same basin of attraction, modifications to elements such as lighting can be changed overtime.	Reduce light pollution (Sustainable Sites Initiative, 2009).	Upgrade lighting fixtures to LED lighting.
Bryant Park and Klyde Warren Park accommodate physical activities such as walking, jogging and open lawn recreations. / R.T. Socio-ecological systems connectivity across scales.	Provide opportunities for outdoor physical activity (Sustainable Sites Initiative, 2009).	***Create a sidewalk that allows walkers, joggers and runners to increase their physical activity.***
Bryant Park maximizes connections along its perimeter with adjacent businesses and residences. / R.T. Smaller systems such as pedestrian experience is effected by larger systems such as vehicular experience.	Improve pedestrian experience by: maximizing connections, minimizing intersection crossing distances, improve crosswalks and enhance sidewalk activity (City of Kansas City, Missouri, 2013).	Create pedestrian crossings along Grand Street that connect Washington Square Park with the adjacent businesses.
Klyde Warren Park is a terminating green space for Harwood Street which provides an iconic, programmatic, streetscape greenspace for downtown Dallas. / R.T. Socio-ecological relationship	Create new parks and greenspace along the Grand Street (City of Kansas City, Missouri, 2013).	Create more greenspace along Grand Street in attempts to transform Grand into the ideal urban boulevard. Washington Square Park will provide a terminating green space for Grand Street.
Klyde Warren Park has open lawn in the center of the park to accommodate for recreational activites. / R.T. Panarchy, Washington Square Park is identified as being in its' conservation stage.	Washington Square Park RFQ/P Provide areas of recreation (City of Kansas City, Missouri, 2013).	***Create areas for walking/jogging/running around the perimeter of the park. Create a large lawn that will accommodate recreational activities.***

GOAL 3

Generate positive social memory of the park's programs and features.

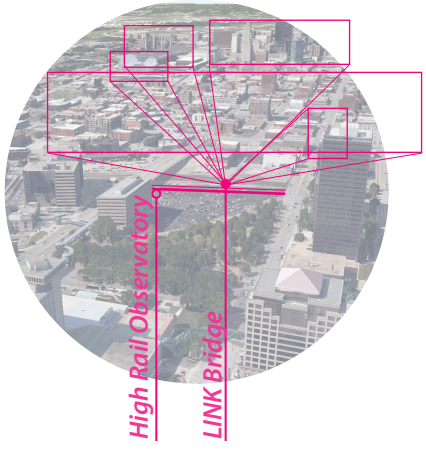


analysis

6.16 - Framing Views - Washington Square Park provides iconic views of downtown Kansa City (Ragoschke 2014, adopted from KCDC 2012).

case study

6.17 - Klyde Warren Park's Views - Klyde Warren's large, open lawn provides iconic views of Downtown Dallas (Ragoschke, 2013).



strategy

6.18 - Iconic Art Framing Views - High Rail Observatory provides views of downtown Kansas City. The LINK Bridge provides an iconic art piece that frames views of Kansas City (Ragoschke, 2014).

Site Analysis

Views of downtown are attributed to topography change.

Washington Square Park is currently lacking proper maintenance. Sidewalks have become uneven over time and lighting has become dated.

Washington Square Park lacks activation at night.

Washington Square Park currently displays Korean War Memorial and George Washington Monument.

Washington Square Park's vegetation is currently viewed from surrounding office towers. The park's 5 acres is open and lacks quiet outdoor spaces.

Grand Street provides a strong vehicular connection between Crown Center, Crossroads and Central Business District.

Case Study / Relience Theory	Objective	Strategy
Klyde Warren Park and Bryant Park capitalize upon their views through their utilization of open lawns.	Capitalize upon views of the Crossroads district and Central Business district (KCDC, 2012).	***Create a viewing platform to capitalize upon downtown views.***
Military Park's outdated and aging infrastructure is undergoing a face lift as the park is revitalized. / R.T. Time and Scale - Over time infrastructure needs revitalized at multiple scales.	Repair streets, sidewalks, and other infrastructure, and develop programs to keep them maintained (City of Kansas City, Missouri, 12, 2011).	Integrate new lighting features that representative of Kansas City's character. Maintain even sidewalks. Create public-private partnership to maintain maintenance of the site.
Bryant Park's transformed from a space that promoted drugs and prostitution. / R.T. Social resilience at different perspectives. Resilience based on intent of design.	Keep residents and visitors safe (City of Kansas City, Missouri, 12, 2011).	Activate the park at all times by developing multiple means of social interaction. Mix business and resident interactions throughout the day.
Military Park's protection and maintaining cultural monuments / R.T. Social connections across time frames (historical context).	Protect and maintain unique cultural and historical places (Sustainable Sites Initiative, 2009).	Maintain Korean War Memorial and George Washington Monument
Bryant Park and Klyde Warren Park both provide ample seating along the parks perimeters, allowing the visitor to people watch and take in the scenery. / R.T. Social interactions at multiple scales.	Provide views of vegetation and quiet outdoor spaces for mental restoration (Sustainable Sites Initiative, 2009).	***Create viewing platforms between Main Street's and Grand Street's bridges to capitalize on panorama views of downtown. Create an array of outdoor spaces similar to case studies; botanical gardens, reading rooms and amphitheaters for mental restoration.***
Klyde Warren Park provides vehicular transit beneath the park on Woodall Rodgers Freeway. / R.T. Systems thinking.	Safe, livable and walkable downtown (City of Kansas City, Missouri, 2013).	Create a vehicular access to Washington Square Park along Grand Street. Create an entrance to the parking garage for vehicular access to Union Station and Washington Square Park.

analysis

6.19 - Existing Large, Open Lawn - Washington Square Park in it's current condition lacks space definition with it's large, open lawn (Ragoschke 2014, adopted from KCDC 2012).

Site Analysis

Washington Square Park currently serves as a memorial park. The park lacks effective programming for its' context.

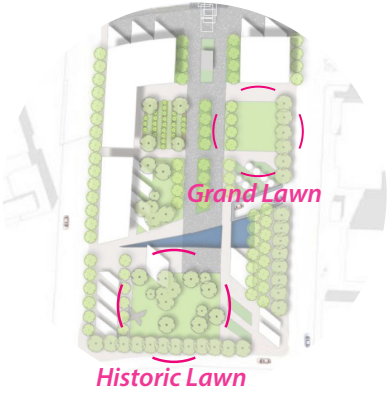
The park is temporary utilized for large functionings such as parades and race gatherings. The park used to be utilized as a small concert venue.

Washington Square Park currently serves adjacent businesses and special event uses such as races and parades. The park used to serve as a concert venue.

case study

6.20 - Bryant Park's Lawn - Bryant Park's large, open lawn provides flexible space for a diverse array of outdoor activities (OLIN, 2014).

GDAP, Making Grand "Grand", Main Street Streetcar and KCDC's Plan for Washington Square Park



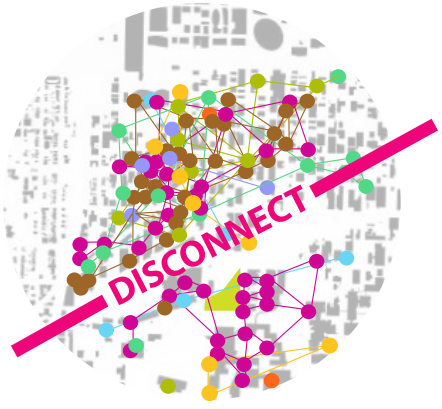
strategy

6.21 - Washington Square Park's Lawns - The historic lawn provides historic context while Grand Lawn provides a space for recreational activities (Ragoschke 2014).

Case Study / Relience Theory	Objective	Strategy
Military Park is currently being revitalized. Memorials were kept to respect cultural heritage of the park. / R.T. Basin of attraction changed from a memorial focused park to better serve its context.	Integrate Kansas City vernacular (City of Kansas City, Missouri, 2013).	Respect the cultural heritage of the memorials within Washington Square Park by maintaining their presence.
Bryant Park's large lawn provides for an array of activities to occur year around. / R.T. Social system interactions occur for multiple	Transform into a gathering place and civic hub (City of Kansas City, Missouri, 2013).	***Create a large open space that can accommodate large crowds of people for multiple activities such as concerts, races or parade gatherings.***
All case studies have exemplified a diverse array of social activity. / R.T Social diversity aids in the park's ability to be resilient.	Perform as a dynamic space that serves people of all ages of all and all physical abilities, as well as every day and special event uses (City of Kansas City, Missouri, 2013).	***Create an event lawn to host an array of activities. Create intimate gathering spaces to serve other functions such as chess, reading lounge, table tennis, outdoor lectures, outdoor picnics, dog park and children's playground.***
Beiderman Redevelopment Ventures plans partaining to all case studies / R.T. Systems thinking	Build upon previous plans, physical assets, and past community engagement exercises (City of Kansas City, Missouri, 2013).	Incorporate design objectives of previous plans, physical assets and past community engagement exercises pertaining to Washington Square Park.

GOAL 4

Activate the park through diverse transportation options.



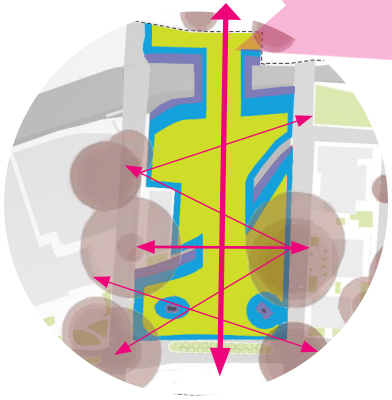
analysis

6.22 - Disconnected Social Amenities

- *Education*
- *Manufacturing*
- *Non-Profit*
- *Publishing*
- *Real-Estate*
- *Health / Beauty*
- *Art / Design*
- *Service*

case study

6.23 - Connections at Klyde Warren Park.
Klyde Warren Park, Dallas, TX (OJB, 2014)



strategy

6.24 - PEDESTRIAN CONNECTIONS

- *Connections*
- *Permeable*
- *Semi-permeable*
- *Non-permeable*

Site Analysis

Washington Square Park has opportunities to connect with adjacencies. However, topography and skywalk hinders these connections.

Large surface parking lot and rail right-of-way limits connections to the Crossroads and Central Business District

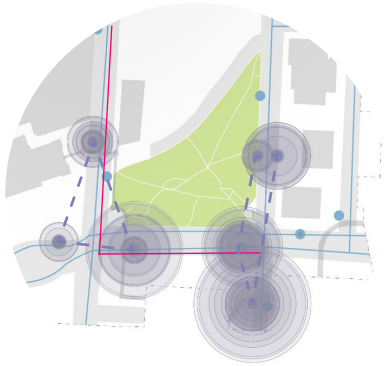
Limited by large surface parking lot and topography change.

Walking is currently surpressed by railroad right-of-way and topography change between Central Business District and Crown Center.

Currently lacks connections to adjacent districts.

Currently has two bus stops and limited access to skywalk.

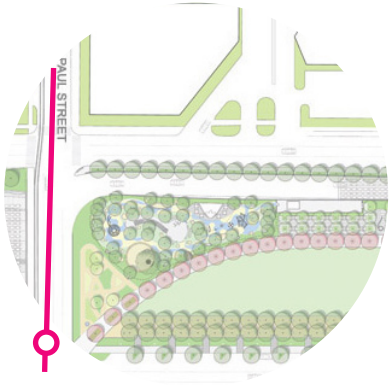
Case Study / Relience Theory	Objective	Strategy
Bryant Park's 1980's transformation transformed the park into a vibrant urban hub. / R.T. As time changes, resilience may move between basins to maintain a stable state.	Revitalize the park to serve as a point of reference with multiple destinations (KCDC, 2012).	***Modify skywalk and topography to better serve Washington Square Park.***
Klyde Warren Park connects Central Business, Arts and Uptown Districts over Woodall Rodger's Freeway which once separated them. / R.T. Connections of systems across multiple scales.	Improve connections northward to the Crossroads and Central Business districts (KCDC, 2012).	***Expand Washington Square Park northward to the Crossroad's District.***
Klyde Warren Park connects to Dallas Trolley route. / R.T. Connections to multiple systems at multiple scales.	Provide a space that better connects Crown Center and Union Station with the Crossroads district (KCDC, 2012).	***Create connections to Main Street Streetcar, Grand Street and the Bike Sharing program within Washington Square park at designated areas.***
Klyde Warren Park bridges Central Business, Arts and Uptown District in downtown Dallas to improve pedestrian connections over Woodall Rodgers Freeway. / R.T. Social resilience made stronger through pedestrian transit modes rather than vehicular oriented modes.	Advance the goal of creating a walkable Downtown by: Elevate walking as the most important mode of transportation (City of Kansas City, Missouri, 12, 2011).	Provide a stronger connection to the skywalk with alterations.
Klyde Warren Park bridges Central Business, Arts and Uptown District in downtown Dallas over Woodall Rodgers Freeway. / R.T. Social resilience made stronger through pedestrian transit modes.	Advance the goal of creating a walkable Downtown by: connect all districts with safe, walkable pathways (City of Kansas City, Missouri, 12, 2011).	***Create pedestrian arteries between Crossroads, Union Station, Crown Center and Penn Valley Park.***
All case studies support transportation options other than the automobile. / R.T. Transit options allow for connections to multiple systems across multiple scales, increasing social diversity.	Advance the goal of creating a walkable Downtown by: Support transportation options beyond the automobile (City of Kansas City, Missouri, 12, 2011).	Integrate multiple transit nodes, such as vehicular parking in the parking garage, bus stops, bike sharing stations, streetcar stops and a stronger skywalk connection.



analysis

6.28 - Connecting Stations
(Ragoschke 2014, adopted from KCDC 2012)

- *Bus Routes*
- *Bus Ridership Composite 4 am - 1 am*
- *Connecting Bus Stations*
- *Main Street Streetcar*



case study

6.29 - Dallas Trolley Car - Dallas Trolley Car provides pedestrian connection to Klyde Warren Park with its' stop on St. Paul Street (Ragoschke 2014, adopted from OJB 2014).

strategy

6.30 - Main St. Station and Grand Blvd Station - Main St. Station provides pedestrian access to Main Street Streetcar, bus stop and bike routes, while Grand Blvd Station provides access to bus stop (Ragoschke 2014).

Site Analysis

Grand Boulevard's width separates the park from businesses east of Washington Square Park.

Currently connected to automobile and bus transit.

Currently Washington Square Park lacks effective and efficient connections to surrounding districts.

N/A Antiscipate change.

N/A Antiscipate change.

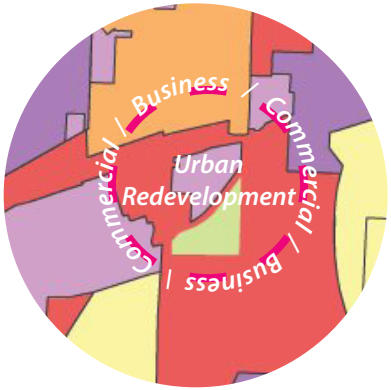
Main Street is a main vehicular corridor that connects north and south Kansas City.

Main Street has been identified as the future site of a street car to connect Crown Center District with Crossroads, Downtown and River Market Districts.

Case Study / Relience Theory	Objective	Strategy
Klyde Warren Park connections with Central Business District, Uptown and Arts District. / R.T. Systems connections at multiple scales.	Reinforce design with the Park & Boulevard System as a destination and compliment plans for Grand Boulevard and Pershing Road (City of Kansas City, Missouri, 2013).	Create stronger pedestrian connections across Grand Street.
Case studies connect to multiple modes of transportation. / R.T. Increase connections and social diversity.	Provide connections to multi-modal transportation (City of Kansas City, Missouri, 2013).	***Connect to Main Street Streetcar, Bike Sharing, and pedestrian routes to the Crossroads District.***
In all case studies, successful connections have been made to the parks surroundings. / R.T. Connecting at multiple scales.	Serve Crown Center, surrounding office buildings, Crossroads District, and the broader community (City of Kansas City, Missouri, 2013).	Create physical connections to the surrounding office buildings, Crossroads District and broader community.
Klyde Warren compliments Dallas Trolley route. Military Park compliments Newark lightrail route and Bryant Park compliments NYC subway system and bus routes. / R.T. Transit connections to multiple scales	Provide public transportation from the River Market district, to the Central Business district, to the Crossroads district to Union Station/ Crown Center district (City of Kansas City, 2012).	Connect to Main Street Streetcar route.
Multiple transit connections in all case studies. / R.T. Increase connections and social diversity.	Provide access to urban civic spaces (City of Kansas City, 2012).	Connect to Main Street Streetcar route in order to be connected to multiple urban spaces in downtown Kansas City.
Klyde Warren Park's location above Woodall Rodger's Freeway allows the park to create an iconic identify to vehicular transit below. / R.T. Social memory	Transform Main Street into a corridor where people can live, work, and shop and be entertained (City of Kansas City, 2012).	Develop Main Street as an iconic street within Kansas City by in-filling vacancies and promoting business and residency.
Klyde Warren and Military Park have streetcar connections / R.T. Improve social diversity across site and metro scales.	Increase walkability in downtown Kansas City and decrease automobile dependency in downtown Kansas City (City of Kansas City, 2012).	***Create Main Street Streetcar connections with Washington Square Park.***

GOAL 5

Create mixed-use development that aligns with aspirations developed in existing Kansas City plans.



analysis

6.31 - RESIDENTS

- *Urban Redevelopment*
- *Downtown Mixed Use*
- *Urban Redevelopment*
- *Business/ Commercial*
- *Residential*
- *Manufacturing*

case study

6.32 - CORPORATE NEIGHBORS

#.# - Park over Woodall Rodgers Freeway. Klyde Warren's unique, memorable quality bridges Arts, Central Business & Uptown Districts over Woodall Rodgers Freeway.

strategy

6.33 - SPACE LAYERING

- *Views*
- *Mixed Use Parking Garage*
- *Views*

Site Analysis

N/A Business Orienated

Crossroads is developing into a vibrant arts district.

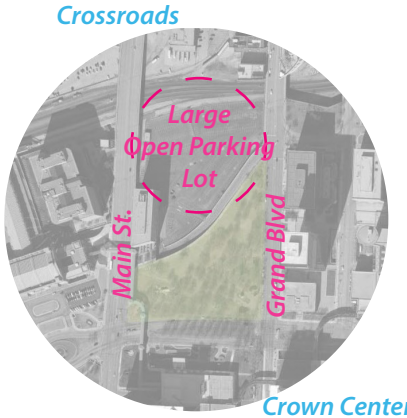
Large surface parking lot and areas adjacent to railroad right-of-way has the opportunity for infill development.

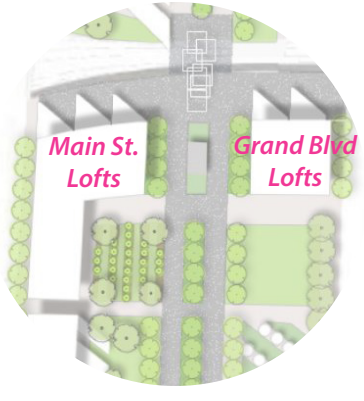
Washington Square Park is currently enclosed by surrounding businesses and topography.

Currently utilized for memorials.

Economic development is developing in Crossroads District.

Case Study / Relience Theory	Objective	Strategy
Klyde Warren Park generated mixed-use and housing developments providing social diversity. / R.T. Social diversity.	Retain and Promote Safe, Authentic Neighborhoods (City of Kansas City, Missouri, 2011).	***Create mixed-use and housing developments near the crossroads district along the rail right-of-way.***
Neighborhoods associated with case studies allow residents to live, work and play within the same area. / R.T. The ability to live, work and play within the same area creates a strong social community and reduces the dependance of non renewable resources.	Maintain the unique character of our neighborhoods (City of Kansas City, Missouri, 2011).	Maintain Crossroads unique arts identity within the new development that connects Crossroads District with Washington Square Park.
Military Park's redevelopment has generated redevelopment and growth in adjacent businesses and residences. / R.T. Change basin of attractions over-time.	Promote compatible infill (City of Kansas City, Missouri, 2011).	***Create infill development in underutilized areas adjacent to the railroad right-of-way and large surface parking north of Washington Square Park.***
Military Park's redvelopment is sparking redevelopment and growth in the adjacent Prudential and Panosonic Businesses. / R.T.	Promote equitable site development (Sustainable Sites Initiative, 2009).	***Utilize the expansion of Washington Square Park to promote site development.***
Bryant Park's ability to adapt to change from Beiderman Redevelopment Ventures planning. / R.T. Integration of social, economic and ecologial systems within design plans.	Promote equitable site use (Sustainable Sites Initiative, 2009).	Program maximum site usage by engaging with adjacencies.
Military Park's redevelopment has generated redevelopment and growth in adjacent businesses and residences. / R.T. Change basin of attractions over-time.	Spark economic development throughout the corridor and neighboring areas (City of Kansas City, 2012).	***Create economic development ties where Main Street, Crossroads District and Washington Square Park connect.***





analysis

6.25 - Opportunies for Development - The large, open parking lot north of Washington Square Park has opportunity for development (Ragoschke 2014).

case study

6.26 - Bryant Park, A Place to Relax - Bryant Park provides residences a place to relax and socially interact outdoors (OLIN 2014).

strategy

6.27 - Main St. and Grand Blvd Lofts - Main St. and Grand Blvd Lofts provide Washington Square Park with additional park users besides the occassional business workers (Ragoschke 2014).

Site Analysis

Washington Square Park currently lacks informational signage.

Grand Street is located two blocks east of Main Street. Grand Street is centrally located within downtown Kansas City and connects Crown Center with the Crossroads District and Central Business District.

Crossroads district is developing mixed-use already. Mixing retail and housing together.

Vehicular oriented.

Grand Street currently provides two lanes of traffic each way, parking lanes on each side and turning lanes.

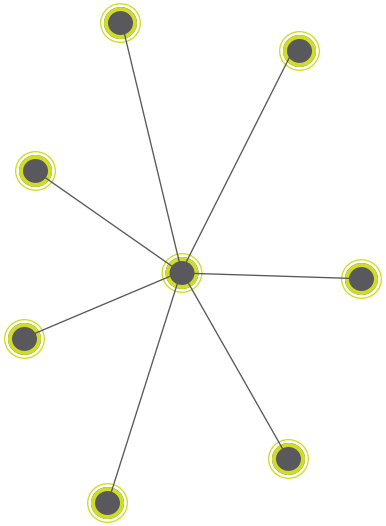
Currently Main Street and Grand Street are heavy vehicular corridors.

Case Study / Relience Theory	Objective	Strategy
Bryant Park and Klyde Warren Park provide site signage to inform the visitor of their location within the context of the park and its' adjacencies. / R.T. Communicating systems at multiple scales.	Provide for optimum site accessibility, safety, and wayfinding (Sustainable Sites Initiative, 2009).	Create signage to inform the pedestrian of their location in relationship with their surroundings.
All case studies exemplify urban parks with signature addresses. Locations of these urban parks within their urban centers have allowed them to obtain signature addresses, as well as their adjacencies. / R.T. Maximum, positive social interaction creates resilience. Overtime these the social interactions create signature addresses from social memory.	Program Grand Street to be the signature address (City of Kansas City, Missouri, 2013).	***Create residential addresses along Grand Street near Washington Square Park. Housing will generate social interaction within Washington Square Park different from the social interaction obtained from the adjacent businesses, thus creating social diversity.***
Bryant Park mixed-use adjacencies / R.T. Socio-economical connections.	Transform Grand Street into a healthy mixed-use corridor simulating investment in retail and housing (City of Kansas City, Missouri, 2013).	***Add additional housing and retail along Main Street, Grand Street and the Rail R.O.W.***
Bryant Park, NYC Bike Sharing Program / R.T. Improve social connections across site and metro scale.	Direct focus on transit and new bike facilities (City of Kansas City, Missouri, 2013).	Integrate bike lanes and increase pedestrian zones along Grand Street.
Klyde Warren Park's is uniquely situated over Woodall Rodgers Freeway. / R.T. Multiple systems have the ability to function within a common denominator.	Utilize Grand as an example for future urban Boulevards (City of Kansas City, Missouri, 2013).	Utilize Grand Street as the major vehicular transportation into the park and residencies.
Klyde Warren compliments Dallas Trolley route. Military Park compliments Newark lightrail route and Bryant Park compliments NYC subway system and bus routes. / R.T. Transit connections to multiple scales	Compliment Main Street's future streetcar proposal (City of Kansas City, Missouri, 2013).	Limit vehicular transit on Main Street with the integration of the streetcar. Focus vehicular transit on Grand Street while integrating bike lanes and stronger pedestrian access.

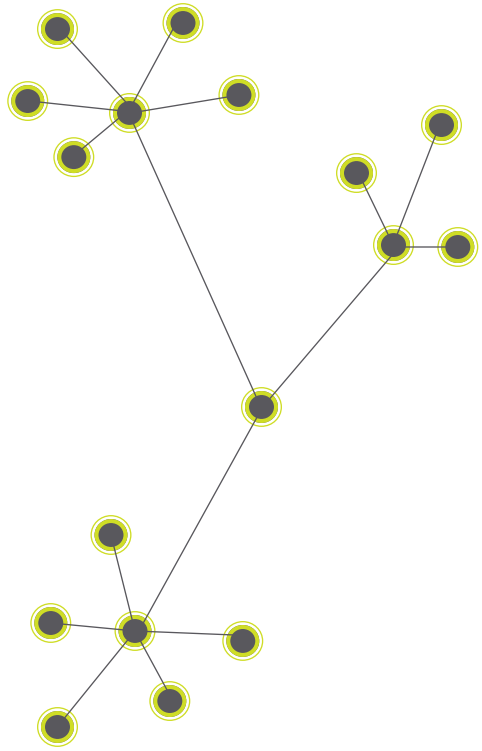
PART 2 - CONTEXT SOCIAL AMENITIES ANALYSIS

CONTEXT SOCIAL AMENITIES ANALYSIS
Connecting social amenities between the Crossroads Art District and Crown Center

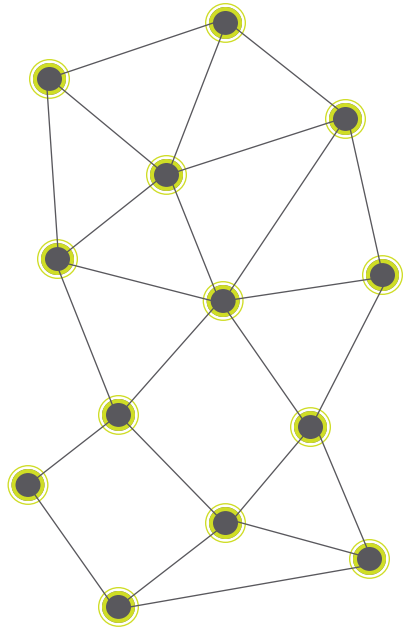
Social Resilience



6.34a - Centralized Topology of Social Systems - Resilience is highly dependent upon each system within the whole. When links are broken, the systems ability to adapt to change becomes more difficult than a hierarchical or decentralized topology (Ragoschke, 2014).

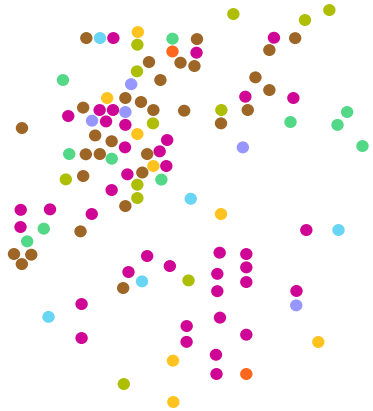


6.34b - Hierarchical Topology of Social Systems - Resilience is distributed into several smaller systems. When links are broken, the systems ability to adapt to change is greater than a centralized system but less than a decentralized system (Ragoschke, 2014).



6.35c - Decentralized Topology of Social Systems - Resilience is distributed across the system. When links are broken, the systems ability to adapt to change is much easier than a centralized or hierarchical system. A decentralized topology of social systems are more resilient than other systems (Ragoschke, 2014).

6.34 - System Topologies (Ragoschke, 2014, Graphics derived from Mark Burgress's "On the Theory of System Administration" 2003)

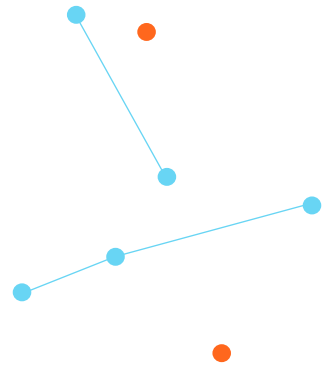


EDUCATION
NON-PROFIT
REAL-ESTATE
ART / DESIGN
MANUFACTURING
PUBLISHING
HEALTH / BEAUTY
SERVICE

Context Social Amenities

There are plenty of social amenities surrounding Washington Square Park in the Crossroads Arts Distrct and Crown Center District. However, the amenities are disconnected by the topography and rail r.o.w. The amenities identified offer people an enjoyable social experience, enhanced value quality services, readily accessible within the community.

6.35 - Context Social Amenities (Ragoschke 2014)



EDUCATION

1 *Kauffman Center for the Performing Arts*
2 *Red Star Studios*
3 *Kansas City Ballet*
4 *Union Station*
5 *Kansas City, MO, School District*

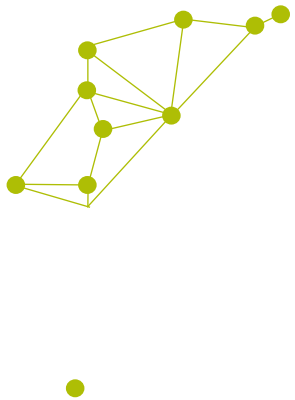
PUBLISHING

6 *The Pitch*
7 *Hallmark Cards*

Education & Publishing

Education in the most general sense referencing the transfer of knowledge, skills, and habits between people. Kauffman Center for the Performing Arts and Kansas City Ballet are several places furthering education. Publishing or the process of producing literature, music or information aids in the educating our society. The Pitch and Hallmark are several centers developing publishing with the sites adjacencies.

6.36 - Education & Publishing (Ragoschke 2014)



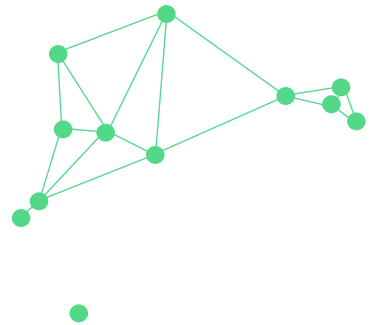
NON-PROFIT

1 *Artstech*
2 *Kansas City Rescue Mission*
3 *Resurrection Downtown*
4 *Jewish Vocational Services*
5 *Christ Community Church - Downtown Campus*
6 *Grand Arts*
7 *1819 Baltimore Homeowners Association*
8 *Central Communications Credit Union*
9 *NACWAA*
10 *Mid-America Arts Alliance*
11 *National World War I Museum at Liberty Memorial*

Non-Profit

The Crossroads Arts District most many of the areas non-profit organizations, or organizations that use surplus funds to pursue their goals. Many non-profit organizations in the area include religious organizations such as Resurrection Downtown, Jewish Vocational Services and Christ Community Church - Downtown Cmapus.

6.37 - Non-Profit (Ragoschke 2014)



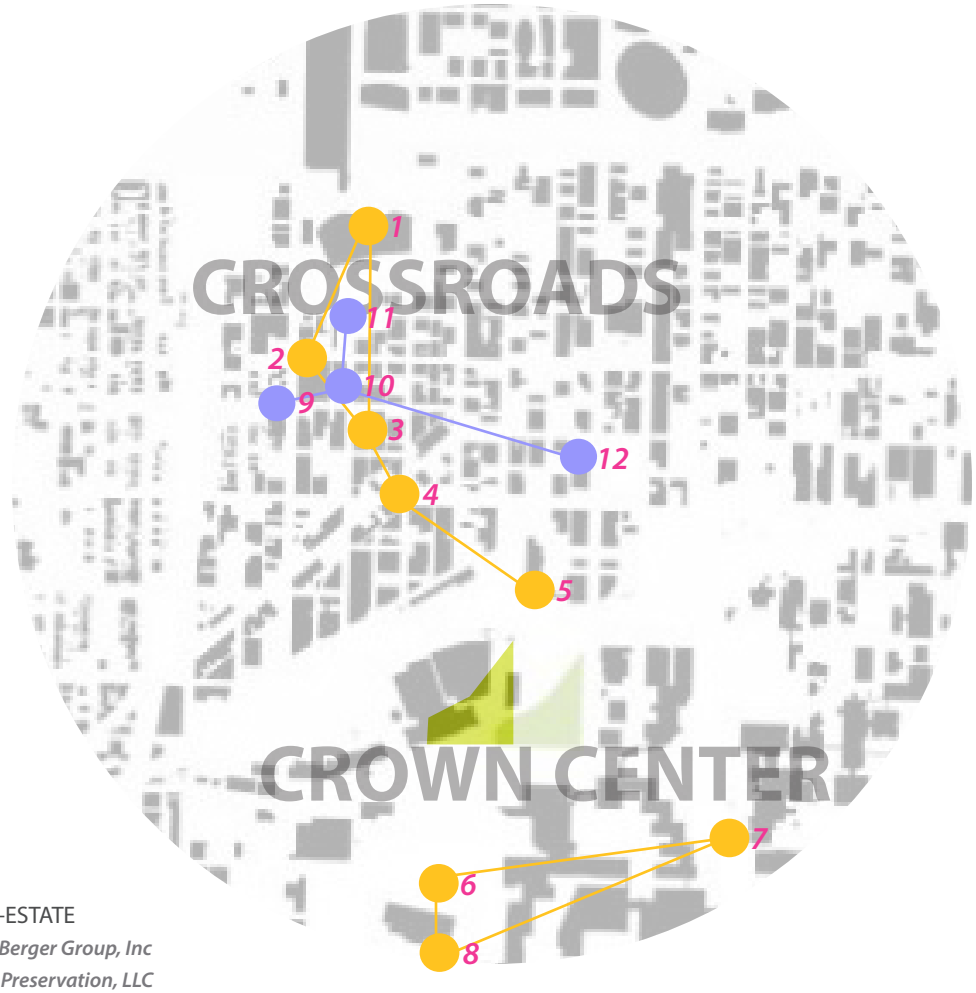
MANUFACTURING

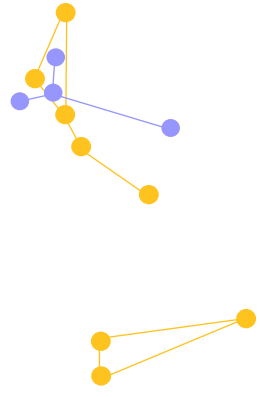
1 *Casey Associates, Inc.*
2 *Foxx Equipment Company*
3 *Faultless Linen*
4 *Strahm Automation*
5 *Autobahn Motorwerks*
6 *Centric Projects*
7 *Brightergy*
8 *Bandwagon Merch*
9 *Kansas City Tent & Awning*
10 *Machine Head*
11 *Tension Envelope*
12 *Portfolio Kitchen & Home*

Manufacturing

Manufacturing or the production of merchandise for use or revenue utilizing labor and technology has always been a strong part of Kansas Cities background. The Crossroads Arts District boasts many manufacturing amenities that aid in the creation of the Crossroads artistic identity.

6.38 - Manufacturing (Ragoschke 2014)





REAL-ESTATE

1 *Louis Berger Group, Inc*
2 *Rosin Preservation, LLC*
3 *Aron Real Estate*
4 *Piper Lofts*
5 *Standard Management, LLC - Western Auto Lofts*
6 *Santa Fe Place*
7 *Longfellow / Beacon Hill*
8 *2555 & 2600 Grand Office Tower*

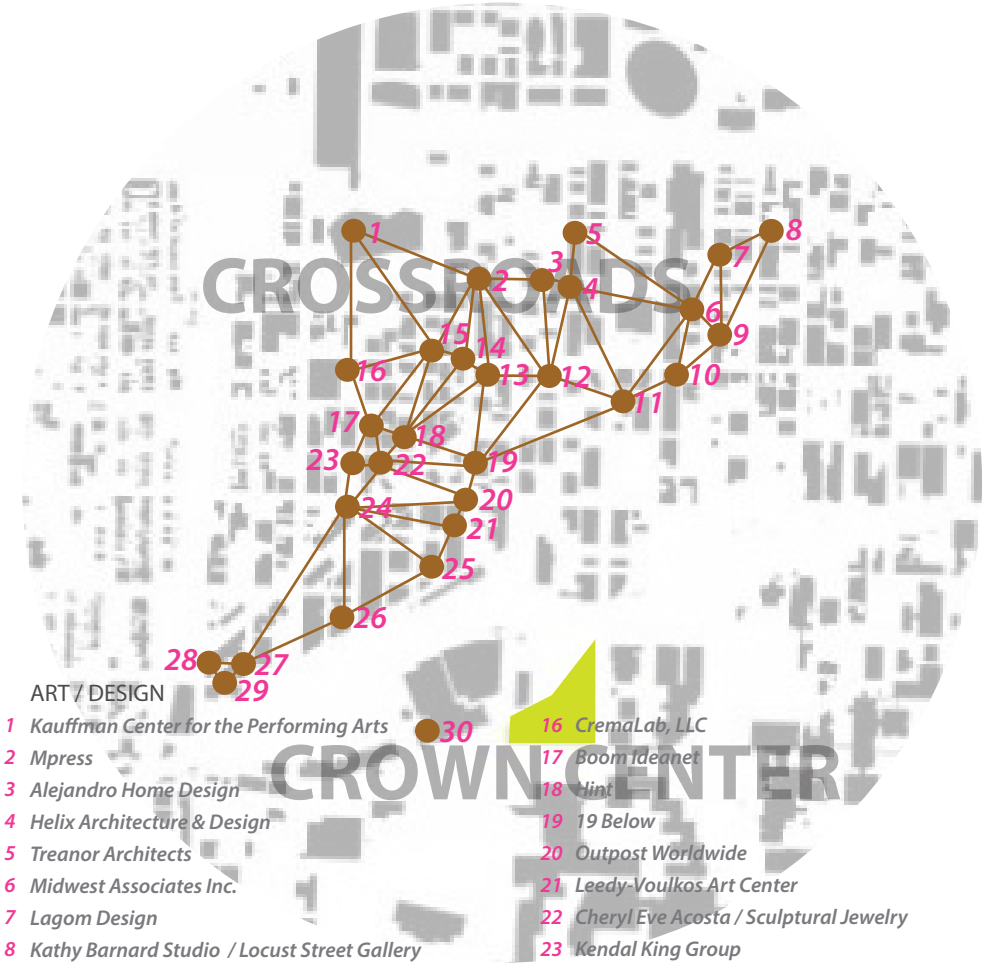
HEALTH / BEAUTY

9 Truman Medical Center - Behavioral Health
10 Crossroads Dentistry
11 Sage Center for Yoga & Healing Arts
12 DERMAdoctor

REAL-ESTATE & HEALTH / BEAUTY

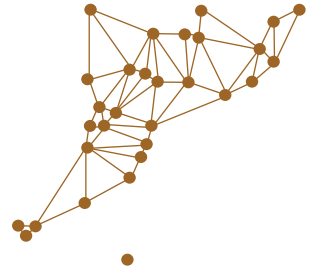
Real-Estate near Washington Square Park include real-estate offices that buy,sell or rent land, buildings or housing, as well as several lofts including Western Auto and Piper Lofts. Health and beauty near Washington Square Park include services that provide people with services that promote beautification and well-being.

6.39 - Real-Estate & Health / Beauty (Ragoschke 2014)



ART / DESIGN

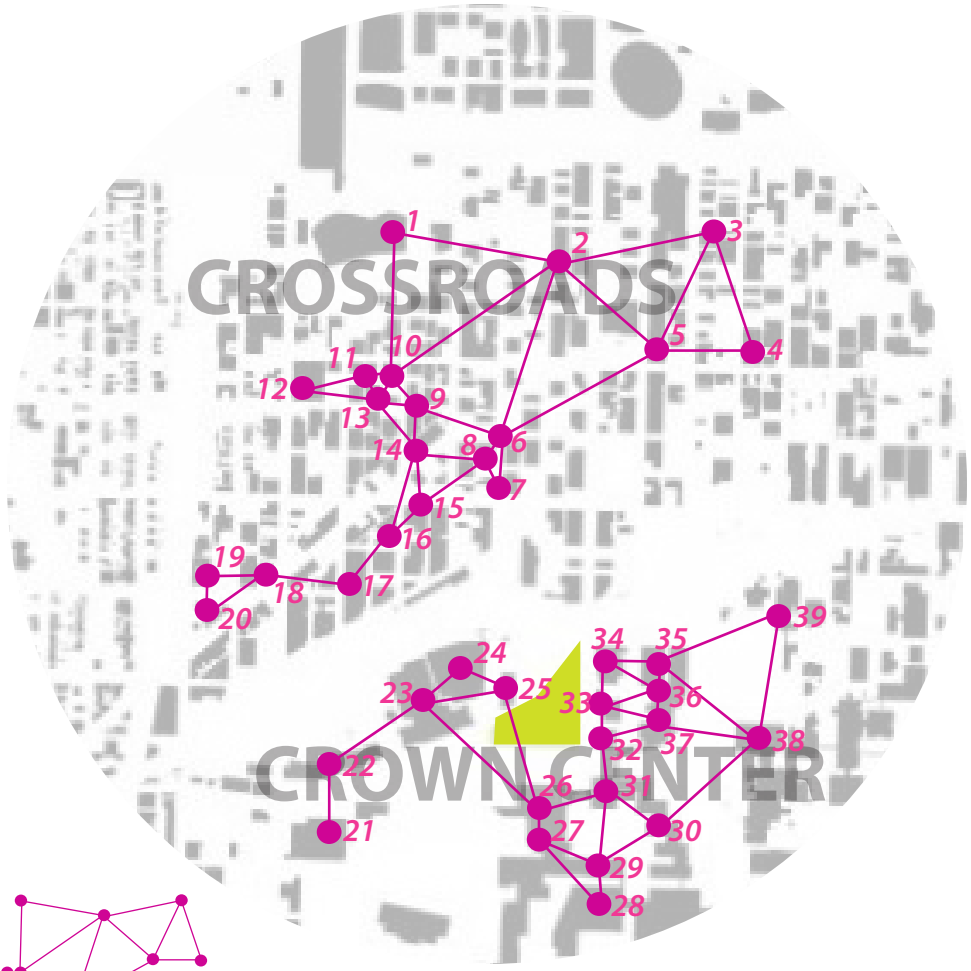
1 Kauffman Center for the Performing Arts
2 Mpress
3 Alejandro Home Design
4 Helix Architecture & Design
5 Treanor Architects
6 Midwest Associates Inc.
7 Lagom Design
8 Kathy Barnard Studio / Locust Street Gallery
9 Kultured Chameleon Street Art Gallery
10 AIA Kansas City
11 Reactor Design Studio
12 Meers Advertising Inc.
13 Weinberger Fine Art
14 Wyandotte Films LLC
15 Wheat Photography
16 CremaLab, LLC
17 Boom Ideanet
18 Hint
19 19 Below
20 Outpost Worldwide
21 Leedy-Voulkos Art Center
22 Cheryl Eve Acosta / Sculptural Jewelry
23 Kendal King Group
24 Sullivan Higdon & Sink
25 MLB Designs & Boutique
26 360 Architecture
27 EAG Advertising & Marketing
28 Bic Media
29 El Dorado Inc.
30 Union Station

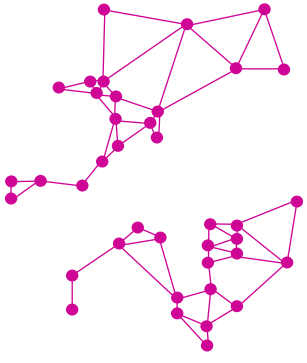


Art / Design

The Crossroads Arts District boasts 29 areas that promote the districts artistic identity. These areas provide services that express artistic expression and design. Services include architecture firms such as El Dorado Inc. and 360 Architecture to art galleries such as Kathy Barnard Studio and Weinberger Fine Art.

6.40 - Art / Design (Ragoschke 2014)





Social Resilience

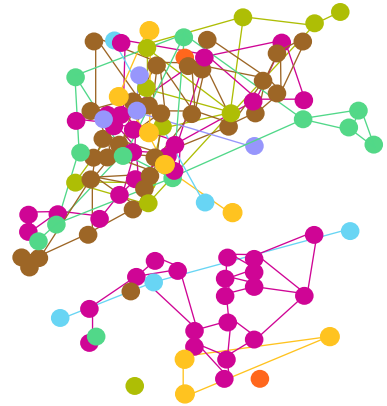
Services

There are multiple services provided around Washington Square Park in the adjacent districts; however, they are disconnected by the topography,and rail r.o.w.

6.41 - Services (Ragoschke 2014)

SERVICES

1 *Kauffman Center for the Performing Arts*
2 *Henderson Engineers, Inc.*
3 *One & Only Wedding Service*
4 *Leonardo Pecanha's Nova Uniao*
5 *Wallace Engineering*
6 *Mission Peak Capital*
7 *Department Zero*
8 *VI Marketing & Branding*
9 *The Robertson Law Group, LLC*
10 *Tail Waggin' PetStop*
11 *Dog Pawz*
12 *IDD InStore Design Display*
13 *StagePort*
14 *Missouri Bank*
15 *NACWAA*
16 *The McLeod Law Firm, P.C.*
17 *Interior Landscapes, LLC*
18 *Studio 2131 / David Morris Photography*
19 *B & I Design*
20 *KC AutoWorX*
21 *Portfolio Kitchen & Home*
22 *US Post Office*
23 *Union Station*
24 *Consumer Orbit*
25 *Blue Cross and Blue Shield of Kansas City*
26 *The Westin Kansas City at Crown Center*
27 *Crown Center*
28 *Hallmark Cards*
29 *LEGOLAND Discovery Center*
30 *Pershing Road Office Complex*
31 *Madrigal's Elite Detailing*
32 *Lathrop & Gage Ls / Library Woolley Brian N.*
33 *Jonathan Sternberg, Attorney, PC*
34 *Assurant Employee Benefits Parmele Law Firm, P.C.*
35 *2301 McGee Office Building*
36 *Crown Center Exhibit Hall*
37 *Sheraton Kansas City*
38 *Children's Mercy*
39 *Truman Medical Center*



EDUCATION
NON-PROFIT
REAL-ESTATE
ART / DESIGN
MANUFACTURING
PUBLISHING
HEALTH / BEAUTY
SERVICE

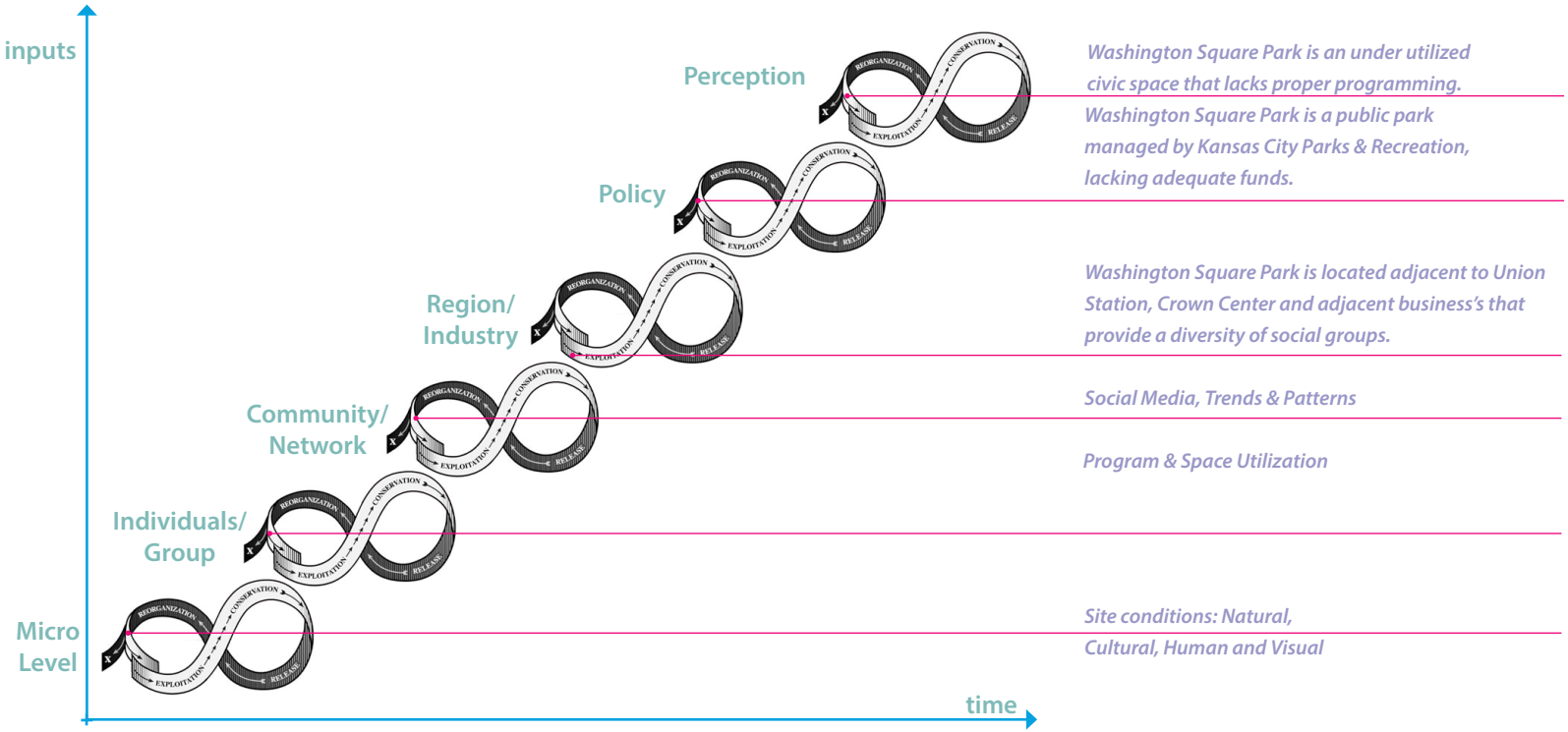
Context Social Amenities Linkage

Washington Square Park has the potential to serve as a catalyst to link social amenities provided by the Crossroads Arts District and Crown Center. The Crossroads Arts District exemplifies a diverse array of social amenities while Crown Center hosts many services. Linking the two districts and increasing their decentralized topology would provide each district with a greater sense of social resilience.

6.42 - Context Social Amenities Linkage (Ragoschke 2014)

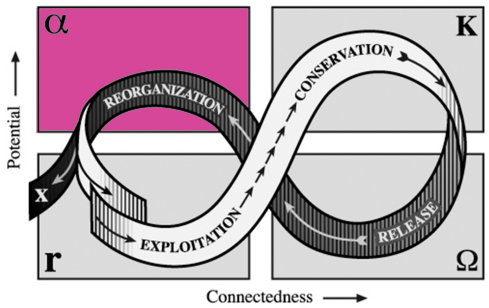
PART 3 - A PROJECTIVE / SOCIALLY RESILIENT DESIGN

A PROJECTIVE / SOCIALLY RESILIENT DESIGN
Washington Square Park, Kansas City, Missouri



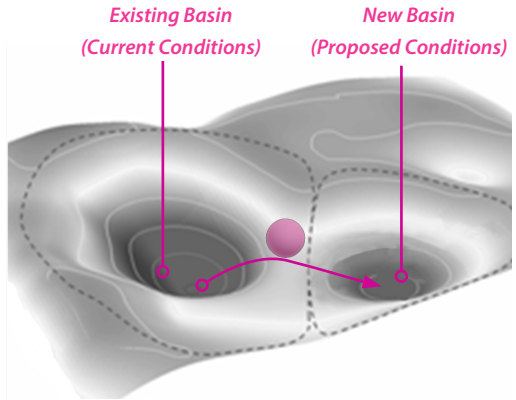
Panarchy Map

The panarchy map depicts some possible social activities that can occur in a temporal scale in Washington Square Park's urban context. Identification of these social activities and how they interact at multiple scales and different spaces is crucial in a site design that strives to exhibit social resilience.



Adaptive Cycle Position

Washington Square Park is currently in a reorganization phase. Kansas City's Parks and Recreation has developed an RFQ/P for Washingotn Square Park in order to redevelop the park to better serve the community. As plans progress with Main Street Streetcar and Making Grand "Grand" plans, Washington Square Park progresses within its' reorganization phase.



Basin of Attraction

Washington Square Park's RFQ/P marks the slow transition of Washington Square Park movement from its' current basin of attraction to a new basin of attraction. The existing basin of attraction has proved non-resilient to exisiting social systems and their disconnects. The new basin aims to connect existing and proposed social systems such as Main Street Streetcar and exisitng social amenities found within Crossroads Arts District and Crown Center.

6.43 (Left) - Washington Square Park Panarchy Map (Ragoschke 2014 adopted from Gunderson and Holling 2001)
6.44 (Middle) - Washington Square Park Adaptive Cycle Position (Ragoschke 2014 adopted from Gunderson and Holling 2001)
6.45 (Far Right) - Washington Square Park Basin of Attraction (Ragoschke 2014 adopted from Gunderson and Holling 2001)


DOWNTOWN SKYLINE


GRAND STREET BUS STOP

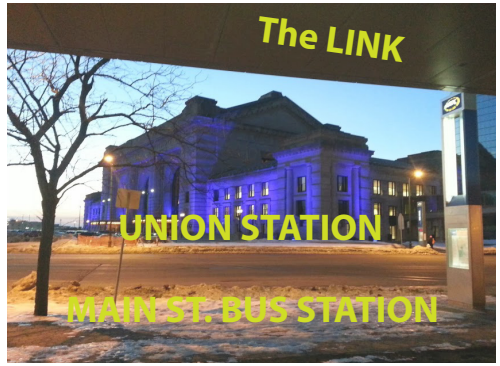

MATURE CANOPY
LARGE LAWN


The LINK
CLOSED PATIO


PARKING LOT
OK ST.


KOREAN WAR MEMORIAL


CROWN CENTER
SHERATON
WESTIN
DOWNTOWN SKYLINE
WASHINGTON SQUARE PARK
MAIN ST. BRIDGE
RAIL R.O.W
PARKING LOT



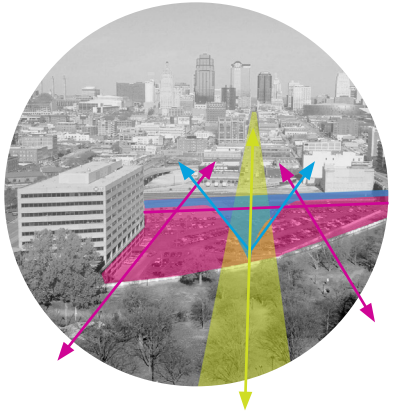
EXISTING SITE

The purpose of utilizing Washington Square Park as a catalyst for urban development in order to move Washington Square Park into a new resilient basin of attraction. The change is initiated through the expansion of Washington Square Park, connecting Crossroads Arts District with Crown Center, thus increasing the park's resilience.

6.46 - Existing Site Photos (Ragoschke 2014)

Location

Washington Square Park is located between the Crossroads Arts District and Crown Center. The park is located between 20th Street to the north and Pershing Rd. to the south. Main Street borders the park's western edge as Grand Street borders the park's eastern edge.

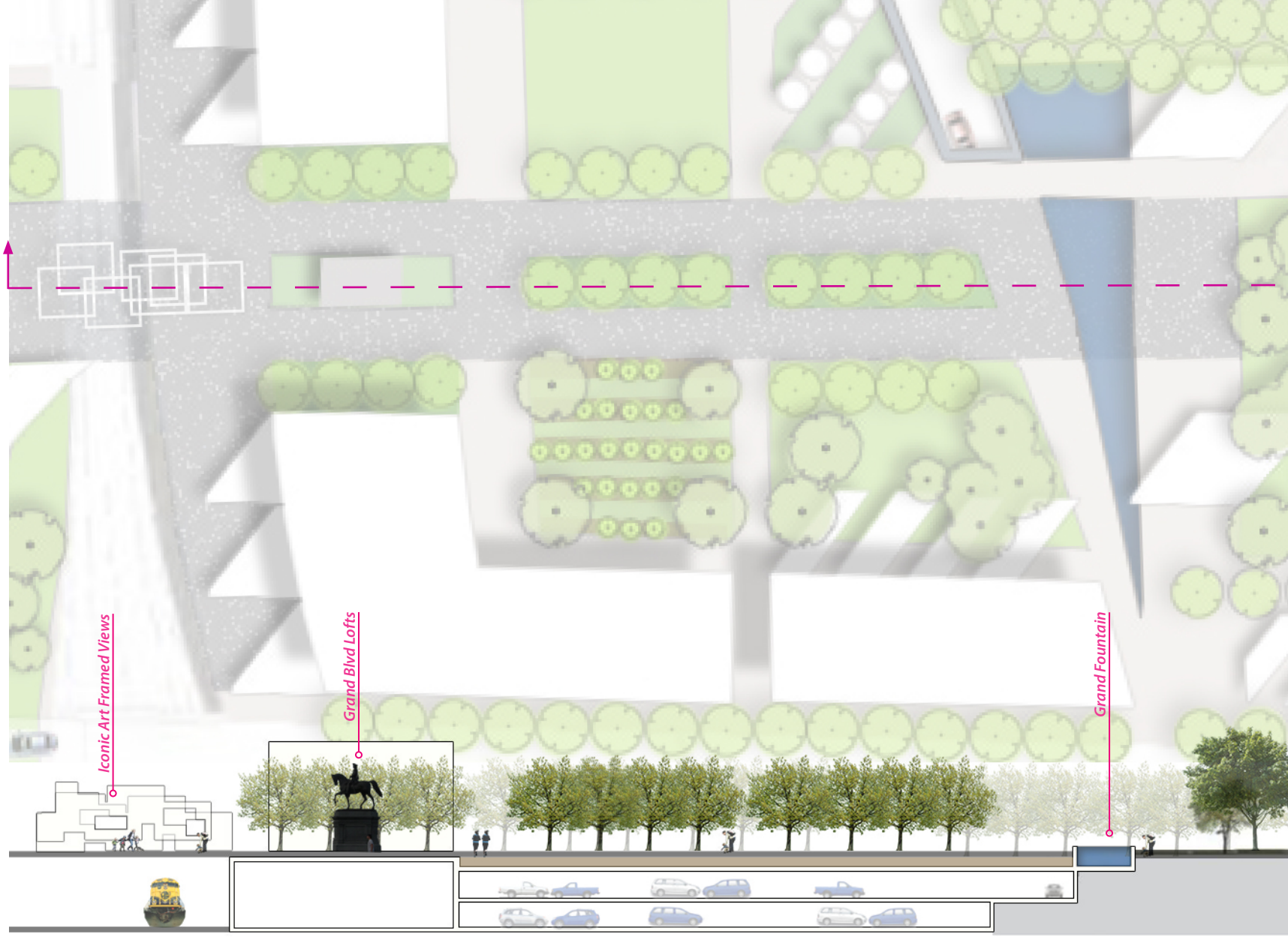


Design Framework

The masterplan focuses on Washington Square Park as a iconic, urban civic space that utilizes Washington Square Park to connect Crossroads Arts District to Crown Center over the railroad r.o.w. The site also focuses on expanding Washington Square Park over the adjacent parking lot to promote economic development to generate a larger user group.

6.47 (Top Left) - Location (Ragoschke 2014)
6.48 (Bottom Left) - Design Framework (Ragoschke, 2014)
6.49 (Right) - Master Plan (Ragoschke, 2014)

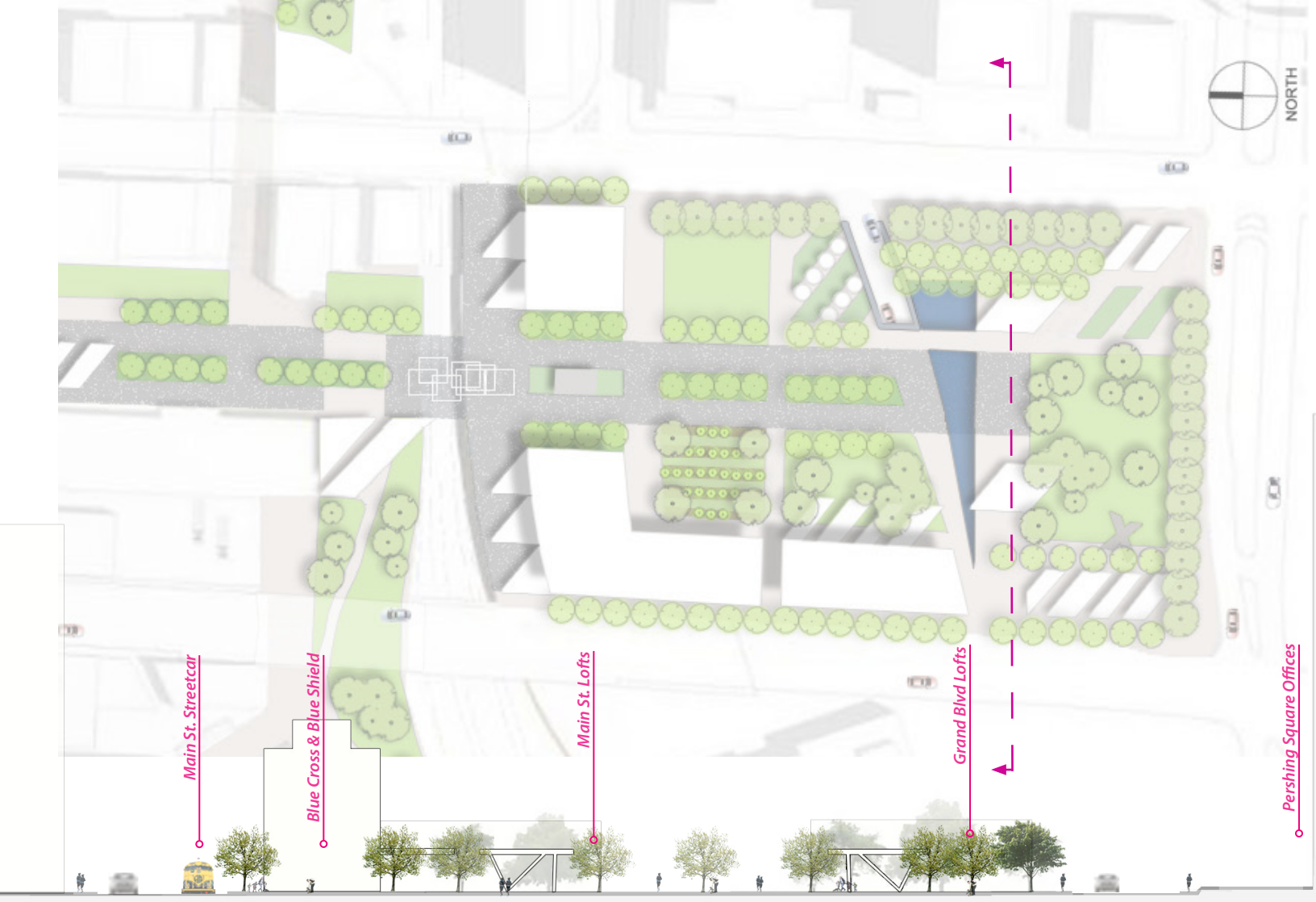

20th St.
Main Street
Grand Street
OK St.
Pershing Road
Western Auto Lofts
Blue Cross & Blue Shield
Union Station
The Westin
Crown Center
Sheraton
Truman Medical Center West
Children's Mercy
NORTH
MASTER PLAN
1 LINK Promenade
2 Main Street Station
3 Korean War Memorial
4 Historic Lawn
5 Grand Blvd. Station
6 Union Pavilion
7 Grand Fountain
8 Parking Garage Entrance
9 Grand Porch / Food Trucks
10 Break Lounge
11 Washington Square Gardens
12 Grand Blvd Lawn
13 Main Street Lofts
14 George Washington Monument
15 Grand Blvd Lofts
16 High Rail Observatory
17 LINK Bridge & Iconic Art
18 Rail Park Pavilion
19 Walnut Promenade
20 Crossroads at Walnut Pavilion
21 Rail Park West Entrance
22 Union Station Observatory
23 Rail Park Trail
24 Rail Park East Entrance



Social Resilience

6.50 - North / South Section - Linking Crossroads Arts District with Crown Center (Ragoschke, 2014)

North / South Section - Linking Crossroads Arts District with Crown Center

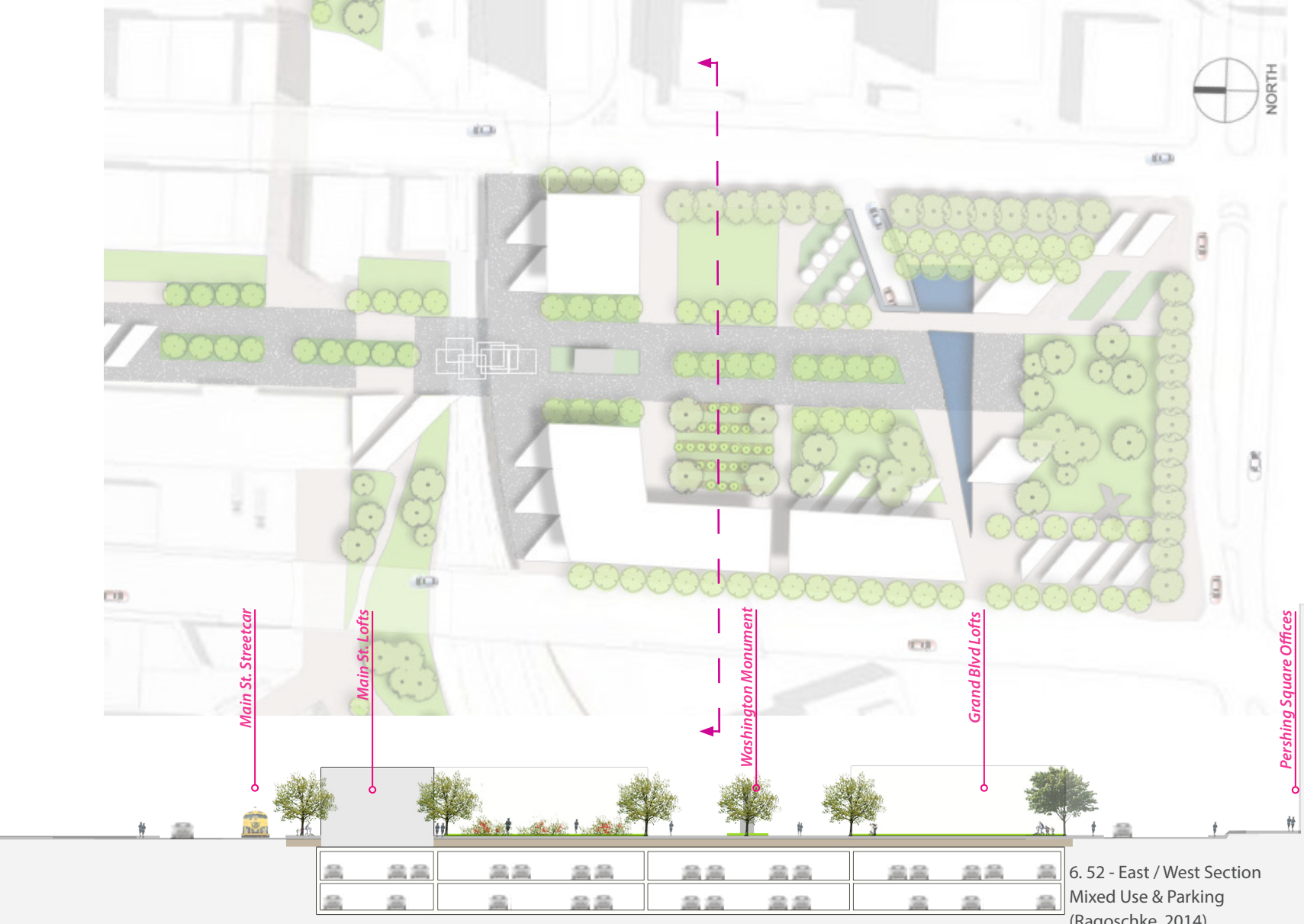


6. 51 - East / West Section - Unifying Main Street and Grand Blvd (Ragoschke 2014)

East / West Section - Unifying Main Street and Grand Blvd

Main St. | Main St. Plaza | Union Pavilion | The LINK Promenade | Grand Blvd. Station & Plaza | Grand Blvd.

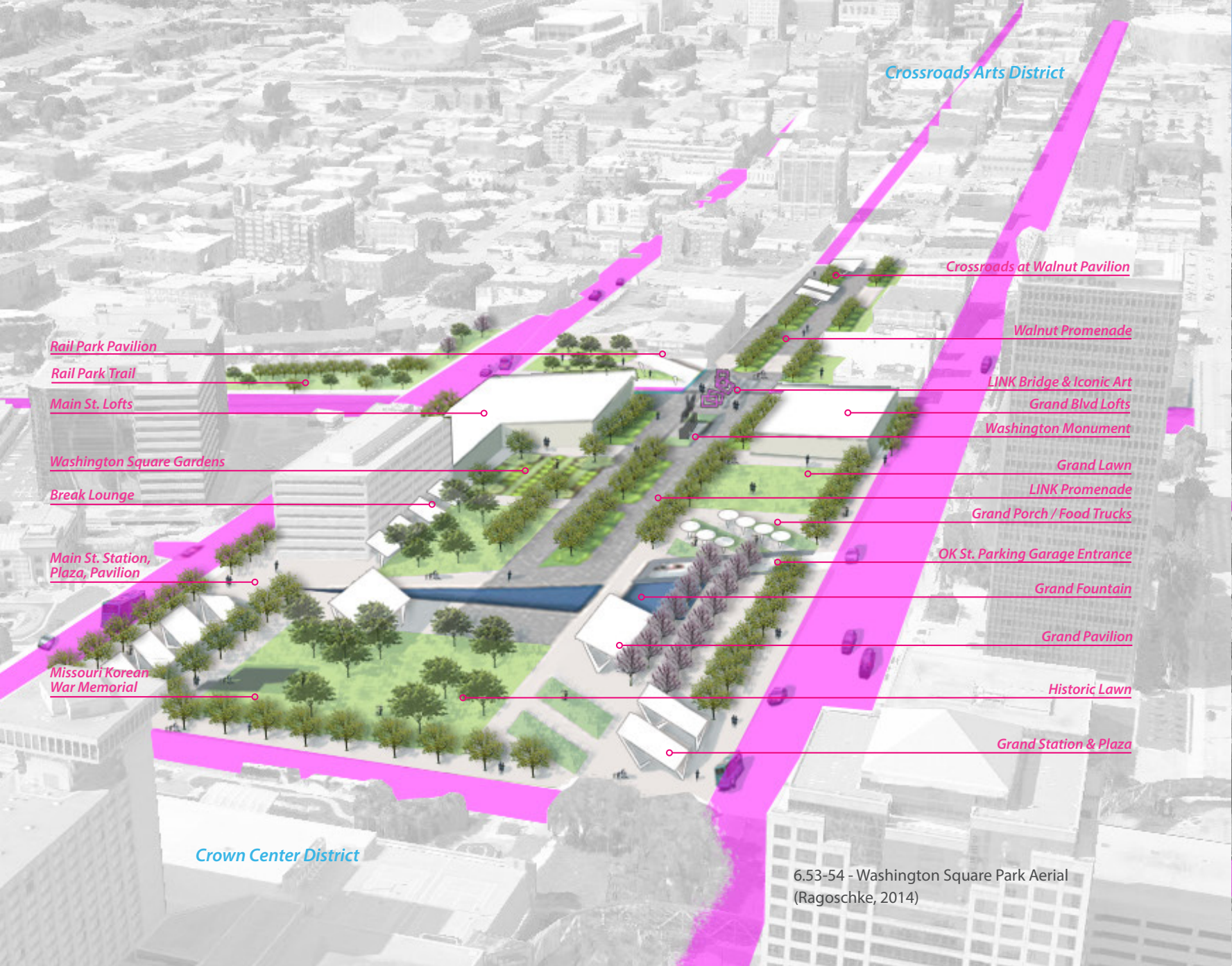
Social Resilience



6. 52 - East / West Section Mixed Use & Parking (Ragoschke, 2014)

East / West Section - Mixed Use & Parking

Main St. | Main St. Lofts | Washington Square Gardens | The LINK Promenade | Grand Blvd Lawn | Grand Blvd



6.53-54 - Washington Square Park Aerial (Ragoschke, 2014)

07 FINDINGS

Key Findings

This project's most impactful aspect is it's ability to influence the City of Kansas City and other stakeholders, the design team, including Coen+Partners and other entities about design decisions to improve the social resilience and redesign of Washington Square Park. Washington Square Park has been previously identified by other plans such as Greater Downtown Area Plan and KCDC's Master Plan of Washington Square Park; however, they plans did not incorporate resilience theory.

Through the literature review, case study analysis, and projcetive design, this master's report explored the application of resilience theory on social goals and strategies found within exisiting plans related to Kansas City and 21st c. guidelines and frameworks for sustainable and high performance landscapes. This process explored social system's interactions related to Washington Square Park and developed social resilience goals and strategies to design a more socially resilient park. The goals included: focus on the park's long-term social resilience, provide a diverse array of elements and activities, generate positive social memory of the park's programs and features, activate the park through diverse transportation options and create mixed-use development that aligns with aspirations developed in existing Kansas City plans. Thes goals are all rooted in resilience theory and serve as a basis for improving social resilience at Washington Square Park through urban design. Design strategies sought out to improve Washington Square Park's social resilience. The goals served as a basis for design decisions.

Goal 1: Focus on the park's long-term social resilience.

Goal one focused on the parks ability to withstand system changes over time. As time has changed, so has the environment around and within Washington Square Park. Design decisions such as developing a multi-functional parking garage that allowed for parking, housing and rooftop parks allowed the park to be connected to the Crossroads District, connecting to more social amenities, thus creating a greater social diversity and resilience.

Goal 2: Provide a diverse array of elements and activities.

Washington Square park currently lacks elements and activities. By providing a diversity of elements that cater to businesses, residences and visitors alike allow the park to cater elements and activities. Elements and activities that were implemented to achieve this goal include: high rail observatory that overlooks the rail r.o.w and provides panoramic views of downtown Kansas City, an iconic art bridge over the rail r.o.w linking

Washington Square Park to the Crossroads District, Grand Lawn providing space for recreational activities, Break Lounge for business workers to enjoy outdoor breaks and much more.

Goal 3: Generate positive social memory of the park's programs and features.

Washington Square Park's prime location between the Crossroads Arts District and Crown Center provides the park with opportunities to capitalize upon its location. Design strategies that aimed to improve the social memory of the park include but not limited to the following: Grand Fountain, High Rail Observatory, and LINK Promenade. Grand Fountain provides visitors with an iconic water feature representative of Kansas Cities fountains. High Rail Observatory provides optimum views of the city while the LINK Promenade provides a pedestrian connection between Crossroads Arts District and Crown Center.

Goal 4: Activate the park through diverse transportation options.

Washington Square Park is located at the southern terminus of the proposed Main Street Streetcar and Making Grand "Grand" plans. As the southern terminus within these plans, Washington Square Park was presented with opportunities to connect to a multitude of transportation options. Design strategies include Main Street and Grand Blvd Plaza, Pavillion and Station. These areas provide access points that welcome visitors to the park via Main Street Streetcar, bicycle routes, and vehicular routes.

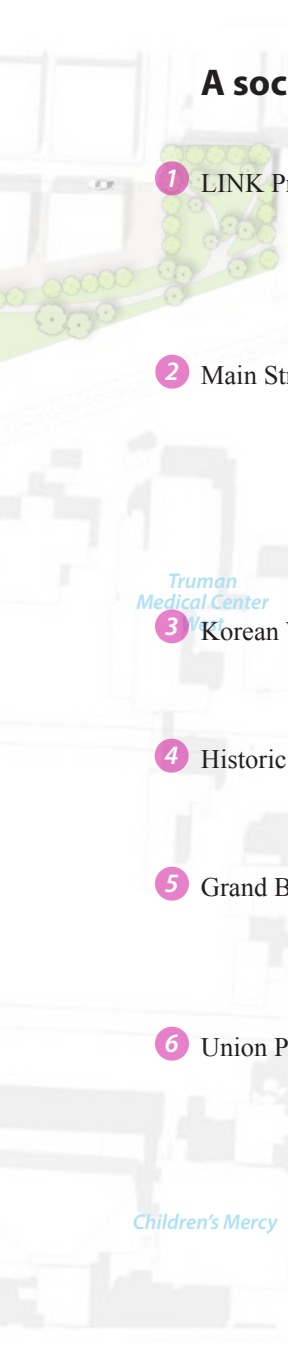
Goal 5: Create mixed-use development that aligns with aspirations developed in existing Kansas City plans.

Washington Square Park is currently surrounded by adjacent businesses. The park lacks social diversity with its users. Design strategies such as Main Street and Grand Blvd Lofts provide the park with a diverse user group. The lofts increase the park's user group and activate the park at all times of the day.

My research and projective design of Washington Square Park provides a new way of designing for a more socially resilient site. This report showcases that resilience theory can be utilized as a guide to inform design decisions. Understanding resilience theory will allow the designer to apply resilience theory concepts such as panarchy, basins of attractions and adaptive cycles to inform their design decisions.

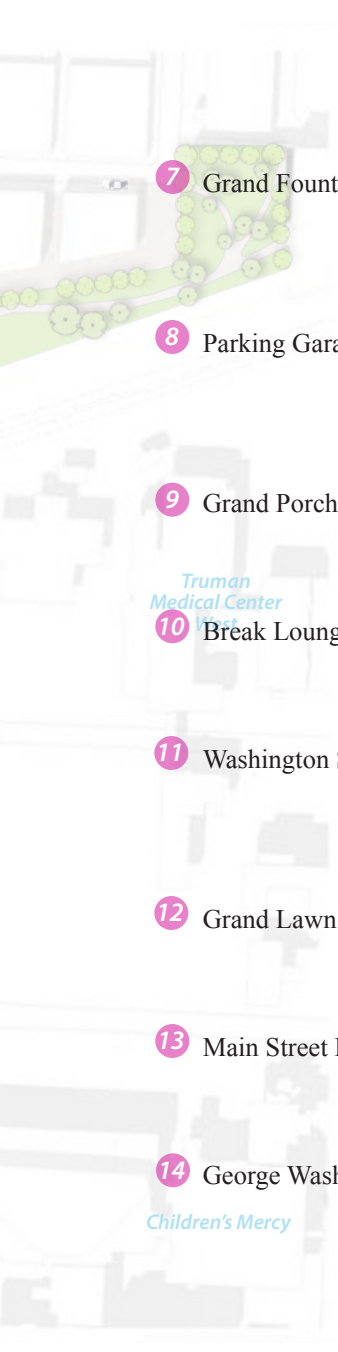
Social Resilience

A socially resilience design of Washington Square Park, Kansas City, Missouri



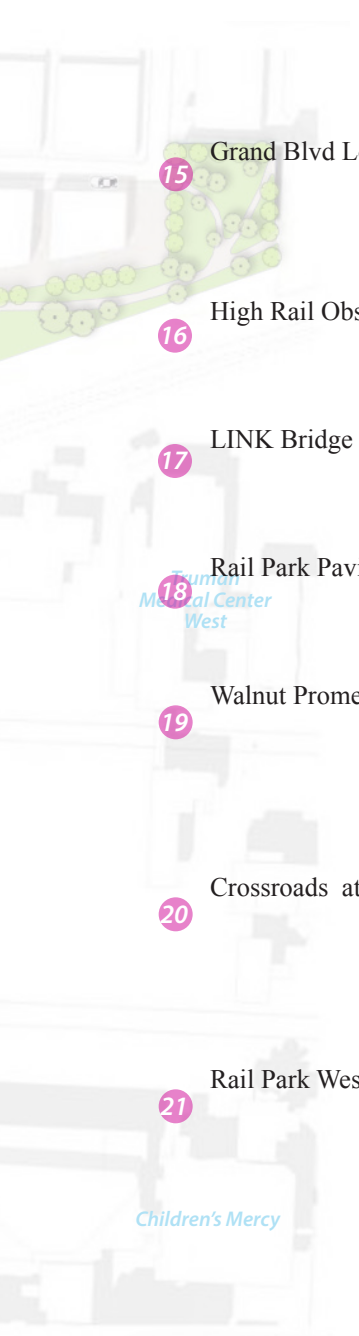
	Objective	Strategy
1 LINK Promenade	Improve pedestrian experience by: maximizing connections, minimizing intersection crossing distances, improve crosswalks and enhance sidewalk activity (City of Kansas City, Missouri, 2013).	• Improved pedestrian connections between Crossroads Arts District and Crown Center. • Minized connection distances centrally located parellel to Walnut St.
2 Main Street Station	Advance the goal of creating a walkable Downtown by: Support transportation options beyond the automobile (City of Kansas City, Missouri, 12, 2011).	• Main Street Station, Plaza and Pavilion connect with Kansas City's proposed streetcar plan, bus stations and bike routes. • Grand Blvd Station, Plaza and Pavilion connect with bus stations and bike routes.
3 Korean War Memorial	Protect and maintain unique cultural and historical places (Sustainable Sites Initiative, 2009).	• Integrate the existing site memorial into the redesigned Washington Square Park.
4 Historic Lawn	Provide views of vegetation and quiet outdoor spaces for mental restoration (Sustainable Sites Initiative, 2009).	• Maintain the existing condition of the large lawn. • Program to better serve it's adjacencies.
5 Grand Blvd Station	Provide a space that better connects Crown Center and Union Station with the Crossroads district (KCDC, 2012).	• Grand Blvd Station maintains the exisitng connection with the bus station that connects Crown Center with adjacent districts.
6 Union Pavilion	Keep residents and visitors safe (City of Kansas City, Missouri, 12, 2011).	• Pavilion activates the park at multiple times during the day, providing a mixture of site users. • Provides shelter during inclement weather.

Social Resilience



	Objective	Strategy
7 Grand Fountain	Integrate Kansas City vernacular (City of Kansas City, Missouri, 2013).	• Kansas City is known as the "City of Fountains". Grand Fountain will provide users with an iconic water feature promoting social memory.
8 Parking Garage Entrance	Transform Grand Street into a healthy mixed-use corridor simulating investment in retail and housing (City of Kansas City, Missouri, 2013).	• Maintain OK Street's unique entrance. • Direct vehicular traffic to Grand Blvd.
9 Grand Porch / Food Trucks	Transform into a gathering place and civic hub (City of Kansas City, Missouri, 2013).	• Provide visitors to the park with food options and a place to eat during scheduled times.
10 Break Lounge	Provide outdoor spaces for social interaction (Sustainable Sites Initiative, 2009).	• Allow business workers with outdoor spaces to escape their offices and socially interact.
11 Washington Square Gardens	Collaboration and Participation by: Aid in the development of community stewardship (NYC Parks and Recreation 2010).	• Provide residences of Main Street and Grand Blvd Lofts with a place to grow fresh produce and interact with one another.
12 Grand Lawn	Provide opportunities for outdoor physical activity (Sustainable Sites Initiative, 2009).	• Allow for residences and visitors to increase their physical activity through recreational games.
13 Main Street Lofts	Program Grand Street to be the signature address (City of Kansas City, Missouri, 2013).	• Provide Washington Square Park with residencies for a greater social diversity.
14 George Washington Monument	Build upon previous plans, physical assets, and past community engagement exercises (City of Kansas City, Missouri, 2013).	• Situate monument to direct views to downtown Kansas City. • Central location for optimal viewing.

Social Resilience



	Objective	Strategy
15 Grand Blvd Lofts	Retain and Promote Safe, Authentic Neighborhoods (City of Kansas City, Missouri, 2011).	• Provide residences with a central location in downtown Kansas City. • Allow residences with a signature address close to work.
16 High Rail Observatory	Capitalize upon views of the Crossroads district and Central Business district (KCDC, 2012).	• Capitalize upon downtown Kansas City's iconic views from Washington Square Park.
17 LINK Bridge	Safe, livable and walkable downtown (City of Kansas City, Missouri, 2013).	• Provide pedestrians with a safer, easier way to move between Crossroads Arts District and Crown Center.
18 Rail Park Pavilion	Promote equitable site use (Sustainable Sites Initiative, 2009).	• Allow rail park users to view trains and develop a sense of historic references. • Engage with adjacencies.
19 Walnut Promenade	Promote compatible infill (City of Kansas City, Missouri, 2011).	• Create spaces for outdoor social interaction. • Provide an outdoor venue for artists to showcase their works during scheduled times such as First Fridays.
20 Crossroads at Walnut Pavilion	Provide access to urban civic spaces (City of Kansas City, 2012).	• Provide pedestrian access from the Crossroads District. • Promote site development to continue pedestrian connection north to Power and Light District along Walnut Street.
21 Rail Park West Entrance	Promote equitable site development (Sustainable Sites Initiative, 2009).	• Provide connections to the west Crossroads community. • Generate a larger connection to social amenities within the Crossroads Arts District.

Social Resilience

	Objective	Strategy
22 Union Station Observatory	Provide for optimum site accessibility, safety, and wayfinding (Sustainable Sites Initiative, 2009).	• Provide Rail Park Trail users with a greater sense of location with iconic views outside of the park. • Provide a place of rest and social interaction along Rail Park Trail.
23 Rail Park Trail	Spark economic development throughout the corridor and neighboring areas (City of Kansas City, 2012).	• Promote econimic development with direct connections to Washington Square Park and other social amenities. • Increase the social amenities connections between Crossroads Arts District and Crown Center to increase the breadth of a decentralized topology system.
24 Rail Park East Entrance	Promote equitable site development (Sustainable Sites Initiative, 2009).	• Provide connections to the east Crossroads Community. • Generate a larger connection to social amenities within the Crossroads Arts District.

Limitations

Primary limitations include time frames and correlations with consultants Coen+Partners and sub-consultants KCDC. Sub-consultants KCDC had already completed an analysis and projective design of Washington Square Park prior to Fall 2013. However, consultants Coen+Partners have not and were hired to complete Washington Square Park's RFQ/P late in the process. Correlating times with Coen+Partners and KCDC has proved challenging.

Secondary limitations include personal knowledge of resilience theory. Prior to fall 2013, I had no previous knowledge of resilience theory. Collaborating with fellow classmates to obtain literature pertaining to resilience theory proved valuable, but fragmented. Through research, analyzing social resilience at multiple scales proved challenging. Social systems are much more complex with diversity of urban, civic spaces and their context.

Additional limitations includes this project is explorative in nature and has the possibility to influence the future redevelopment of Washington Square Park. The success of this project's ability to influence stakeholders is highly dependant upon the stakeholders understanding of Washington Square Park's social resilience.

The redesign of Washington Square Park focused on developing the park to be more socially resilient. Ecological and economic systems were not identified. After a social resilient base has been established, ecological and economical systems can be addressed to improve resilience across all systems; social, ecological and economical.

The methodology of this report could have also been a limitation. Social system goals, objectives and strategies were developed from existing Kansas City Plans. Exisitng plans included comprenhesive data based upon previous research that included surveys of the public. This report did not include new surveys; however, did develop social goals, objectives and strategies based upon research that did. Specific social topics , such as mixed use development could've been explored by interacting with the people within the social context of Washington Square Park. However, observations were made from research previosly performed within exisitng Kansas City Plans.

Future Research

Research that guided this report and projective design of Washington Square Park identified that Washington Square Park could be more resilient if it's boundaries were changed. Through my projective design, Washington Square Park's boudaries were altered to create a greater social resilience between adjacent districts, Crown Center and Crossroads Arts District. Within the case studies and goals for creating a more socially resilient Washington Square Park, public-private partnerships are identified as crucial components to the success of a park. Future research needs to be performed in order to acquire additional land and form public-private partnerships.

The research gathered within this report can be utilized as a method to guide other urban, civic social systems designs within downtown Kansas City. A similar process of looking at existing plans, extracting objectives related to resilience theory, then developing objectives to form socially resilient goals and strategies can be uitilized for urban civic spaces outside of the Kansas City area. To advance the research performed within this report, the same process can be utlized to develop ecological and economical goals and strategies from existing plans related to a given site.

Concluding Thoughts

Social systems within urban environments are multi-dimensional and complex. As Kansas City continuously changes with time, fluctuation has been seen in the city's urban civic spaces' social resilience. In 2013, Kansas City Parks identified Washington Square Park with the potential to better serve downtown Kansas City and issued an RFQ/P. The RFQ/P described Washington Square Park as having a prime urban location with the potential to "… transform into a gathering place and civic hub, serving Crown Center, the surrounding office buildings, the Crossroads District, as well as the broader community" (City of Kansas City, 2013).

Throughout this report, emphasis was placed on connecting social systems at multiple levels in order to improve the social resilience of Washington Square Park. Utilizing the Washington Square Park RFQ/P, GDAP, Main Street Streetcar, Making Grand "Grand" and KCDC's plan for the park, as well as 21st c. guidelines and frameworks for sustainable and high performance landscapes, goals and objectives were identified to revitalize the park and improve the park's social resilience.

The proposed revitalization of Washington Square Park was inspired by C.S. Holling's resilience theory's application on existing Kansas City's plans. Throughout the process, a larger understanding of resilience theory and its' application to social systems at various scales guided design decisions for Washington Square Park.

A synthesis of social resilience goals and objectives from literature reviews, existing Kansas City plans, guidelines and frameworks for sustainable and high performance landscapes and case study analysis were transformed into a set of social resilience guidelines that guided design objectives for Washington Square Park. Applying resilience theory fundamentals, such as panarchy, adaptive cycle and basins of attraction to case studies allowed for a distillation of pertinent design strategies utilized for specific programs within the redesign of Washington Square Park. This process demonstrates that the application of resilience theory on Washington Square Park can be utilized as an example to guide future urban, civic space design. A similar process can be utilized for other urban, civic space design.

Identification of existing plans relevant to a site is crucial when identifying design strategies. However, responding to those strategies may vary by location. Additional social goals and strategies can be derived from resources such as SITES, LAR and guidelines such as NYC's 21st c. Guidelines for Sustainable and High Performance Landscapes. Combining social goals and strategies from existing plans, guidelines and frameworks proves fundamental for a social resilient design.

A socially resilient design strives to provide individuals, groups and communities with the ability to adapt, grow and respond to future changes as they arise. It's crucial for a design to be socially resilient allowing people to live, work and play to their fullest potential, thus improving their quality of life. When people live to their fullest potential, they tend to value the aspects that contibute to their well-being. Thus when a space provides amenities that improves the user groups quality of life, the space develops more value. The redesign of Washington Square Park consists of social amenities aimed to improve the well-being of its' user group.

Washington Square Park Consultants, Coen+Partners can utilize this research and design proposal to help guide design decisions that will contribute to the social resilience of Washington Square Park. The methodology of this report can then be utilized to guide additional researach such as ecological and economical goals, objectives and strategies.

By implementing design strategies that focus on Washington Square Park's social resilience, Washington Square Park has the ability to better serve Crown Center, the surrounding office buildings, the Crossroads District, as well as the broader community, becoming more socially resilient.

Social Resilience

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Glossary of Terms

Adaptability – "The capacity of actors in a system (people) to manage resilience. This might be to avoid crossing into an undesirable system regime, or to succeed in crossing into a desirable one" (Walker and Salt 2006, 163).

Adaptive Cycle – "A way of describing the progression of social-ecological system through various phases of organization and function. Four phases are identified: rapid growth, conservation release, and reorganization. The manner in which the system behaves is different from one phase to the next, with changes in the strength of the system's internal connections, its flexibility, and its resilience" (Walker and Salt 2013, 213).

Rapid Growth (r) - "A phase in which resources are readily available and entrepreneurial agents exploit niches and opportunities" (Walker and Salt 2013, 213).

Conservation (K) - "A phase in which resources become increasingly locked up and the system becomes progressively less flexible and responsive to disturbance" (Walker and Salt 2013, 213).

Release (omega) - "A phase in which a disturbance causes a chaotic unraveling and release of resources" (Walker and Salt 2013, 213).

Reorganization (alpha) - "A phase in which new actors (species, groups) and new ideas can take hold. It generally leads to another r phase" (Walker and Salt 2013, 213).

"The new r phase may be very similar to the previous r phase or may be fundamentally different. The r to K transition is referred to as the fore loop, and the release and reorganization phases are referred to as the back loop. Though most systems commonly move through this sequence of the phases, there are other possible transitions" (Walker and Salt 2013, 213).

Basin of Attraction - "All the stable states of the system that tend to change toward the attractor. An attractor is a stable state of a system, an equilibrium state that does not change unless it is disturbed. The basin of attraction is often described using the ball-in-the-basin metaphor" (Walker and Salt 2013, 214).

Complex Adaptive Systems – Systems which "have the potential to exist in more than one kind of regime…in which their function, structure, and feedbacks are different. Shocks and disturbances to these systems…can drive them across a threshold into a different regime" (Walker and Salt 2006, 31).

Equilibrium - "A steady-state condition of a dynamic system where the interactions among all the variables (e.g., species) are such that all the forces are in balance and no variables are changing" (Walker and Salt 2013, 214).

Feedbacks - "The secondary effects of a direct effect of one variable on another that cause a change in the magnitude of that (first) effect. A positive feedback enhances the effect; a negative feedback dampens it" (Walker and Salt 2013, 214).

Focus scale - A scale, such as regional, metro, or site, which the study system resides in, is the focus of the resilience study, and determines what systems above and below will be studied for their influence on the focus scale.

Kansas City Downtown Council - The downtown council is a non-profit organization who works with the city and business owners to make a more vibrant, healthy, and economically sustainable downtown.

Kansas City Parks and Recreation - Kansas City Parks and Recreation, KC Parks, is a department within the city government who uses city funding to manage and improve public parks within the city.

Panarchy - "the term used to describe a concept that explains the evolving nature of complex adaptive systems. Panarchy is the hierarchal structure in which systems of nature (for example forests, grasslands, lakes, rivers, and seas), and humans (for example, structures of governance, settlements, and cultures), as well as combined human-nature systems (for example, agencies that control natural resource use) (Gunderson and others 1995) and social-ecological systems (for instance, co-evolved systems of management) (Folke and others 1998), are interlinked in never-ending adaptive cycles of growth, accumulation, restructuring, and renewal. These transformational cycles take place in nested sets at scales ranging from a leaf to the biosphere over periods from days to geologic epochs, and from the scales of a family to a socio-political region over periods from years to centuries" (Holling 2001, 392).

PIAC - The Public Improvements Advisory Committee (PIAC) is a part of the Capital Improvements Program for the City of Kansas City, Missouri. The committee makes recommendations how the capital budget is distributed for city and neighborhood improvement projects based on input from citizens.

Redundancy – Repeated functions within a system to ensure operation of the system if a function fails.

Regime - "A set of states that a system can exist in and still behave in the same way-still have the same identity (basic structure and function). Using the metaphor of the ball in a cup, a regime can be thought of as a system's basin of attraction. Most social-ecological systems have more than one regime in which they can exist" (Walker and Salt 2013, 215).

Regime shift - "When a social-ecological system crosses a threshold into an alternate regime of that system" (Walker and Salt 2013, 215).

Request for Qualifications/Program (RFQ/P) - The Request for Qualifications/Proposals KC Parks distributed for Washington Square Park is a document which outlines the expectations of the park improvement project. It lists qualifications necessary for teams interested in bidding on the project, the goals of the park improvement, and the products expected when working on the project.

Resilience - "Resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist" (Holling 1973, 17).

Specified resilience – Resilience of a known disturbance. Resilience "of what, to what" (Walker and Salt 2006, 120).

General resilience – "general capacities of a social-ecological system that allow it to absorb unforeseen disturbances" (Walker and Salt 2006, 121).

State of a system - "Defined by the values of the "state" variables that constitute a system. For example, if a rangeland system is defined by the amounts of grass, shrubs, and livestock, then the state space is the three-dimensional space of all possible combinations of the amounts of these three variables. The dynamics of the system are reflected as its movement through this space" (Walker and Salt 2013, 215).

Stakeholder - "Any individual or organization that can affect or be affected by the management of the resources affected" (Gunderson et al. 2010, 52).

Sustainability - "The likelihood an existing system of resource use will persist indefinitely without a decline in the resource base or in the social welfare it delivers" (Walker and Salt 2006, 165).

System - "The set of state variables together with the interactions between them, and the processes and mechanisms that govern these interactions" (Walker and Salt 2006, 165).

Thresholds - "Levels in underlying controlling variables of a system in which feedbacks to the rest of the system change" (Walker and Salt 2006, 165).

APPENDICES

APPENDIX A

Argumentation Diagram

ENTHYMEME

CLAIM: The application of resilience theory with landscape architecture theory has the ability to create social resilience goals and objectives for urban design.

REASON: because resilience theory has the ability to provide a holistic approach to the application of social resilience to urban landscapes.

GROUNDS

Evidence and arguments depicting the value of the utilization of resilience theory to develop an application of social resilience goals and objectives that can be applied to landscape architecture.

- Literature review depicting frameworks and guidelines that highlight social aspects of urban design.
- Case studies analysis' from the compilation of social resilient goals and objectivess from the precedent framework and guidelines.
- Utilization of my social resilience goals and objectives to develop and evaluate a projective design of Washington Square Park, Kansas City, Missouri.

POSSIBLE CONDITIONS OF REBUTTAL

ARGUMENTS:

- Landscape architecture is progressing in a postive direction towards sustainable futures without resilience theory.
- Other programs such as LAF (Landscape Architecture) and SITES already apply frameworks and guidelines that address social aspects of urban design.
- Social resilience guidelines does not address all systems within urban spaces.

POSSIBLE CONDITIONS OF REBUTTAL

ARGUMENTS:

- Landscape urbanism is progressing landscape architecture and other design professions in a positive direction towards sustainable futures without resilience theory.
- Social resilience can not be accomplished in existing, developed areas.
- Designers already cognitively design for social resilience based on site analysis prior to any design.
- Resilience theory is more scientifically based and has a limited relationship to the landscape architecture profession.

WARRANT

Resilience allows designers to practice a holistic approach when designing complex urban systems.

Resilience theory should be utilized to address social systems at multiple scales and time frames in urban design.

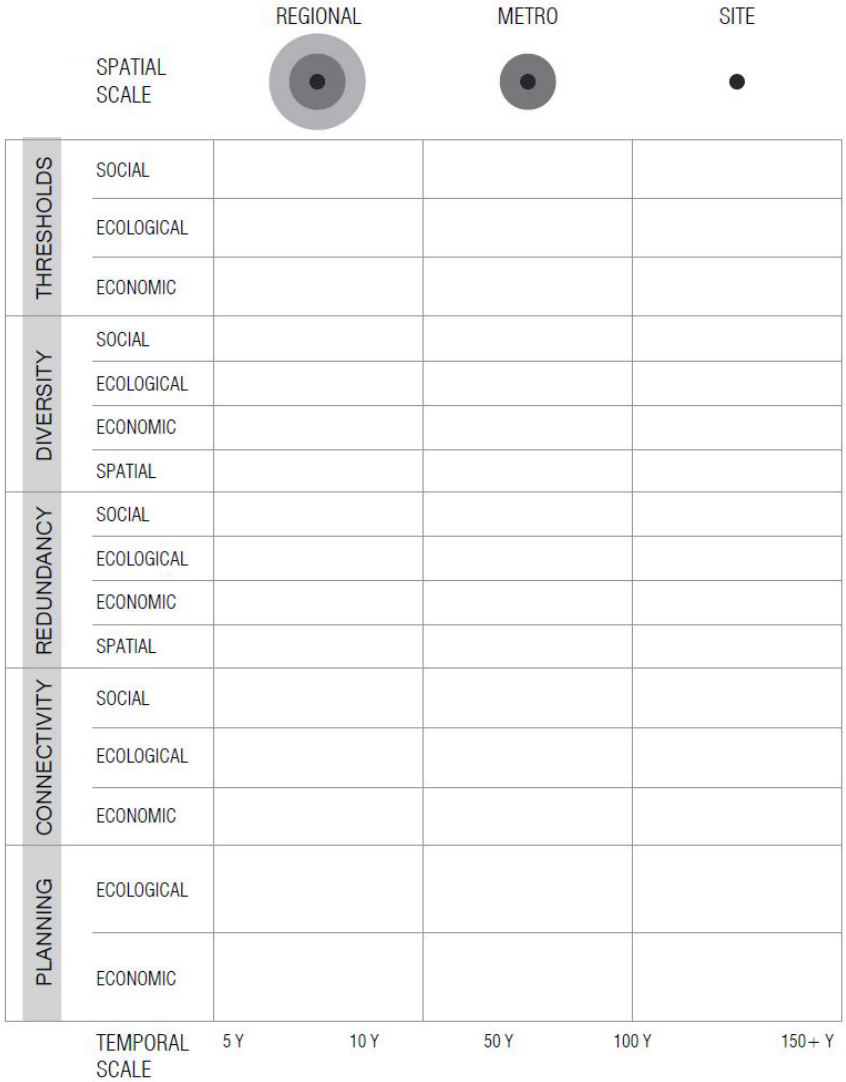
BACKING

Arguments explaining why resilience theory provides a more holistic, logical, effective, and efficient methods to design for the health, welfare and safety of urban design than current current sustainable practices.

- Identify relationships between resilience theory and social systems with linkages to economics and ecological systems.
- Resilience theory identifies social systems at multiple scales and time frames. Current sustainable methods do not.
- An application of my social resilience goals and objectives derived from current 'sustainable' frameworks and guidelines on case studies depict how resilience theory could improve the design.
- Current 'sustainable' practices lack frameworks and guidelines that address how social systems interact and modify over time.

APPENDIX B

Kevin Cunningham's Analysis Matrix (Cunningham 2013)



APPENDIX C

Bryant Park Analysis Matrix

Bryant Park Social Resilience Analysis Matrix			
	Regional	Metro	Site
Thresholds	1	2	3
Diversity	4	5	6
Redundancy	7	8	9
Connectivity	10	11	12
Planning	13	14	15

Extracted Goals and Methods for Social Resilience:

Thresholds

1 (Regional Scale)
• Provide an instrumental piece to the New York City's park's system.
• Connection to New York City's Subway Lines: B,D,F,M & 7 lines (2 direct connections to the subway.)

2 (Metro Scale).
• Provide an iconic park within the heart of America's largest city between Fifth and Sixth Avenues and between 40th and 42nd Streets in Midtown Manhattan, New York City.
• Provide outdoor public space for an increasing urban population.
• Reduce CO2 Emissions by providing better connectivity throughout the park.
• Reduce the urban heat island effect through the creation of a green roof over New York City's Public Library Stacks.
• Limit available parking to promote public transportation and walking as means of travel to and from the park.
• Reduce the dependency of fossil fuels by promoting bicycling and pedestrian activity as means of movement between districts in Midtown Manhattan.
• Provide qualities unique to the surround areas by connecting the architectural elements and qualities of the adjacencies.

3 (Site Scale).
• Provide space for increased population during events such as races, parades, sporting activities, and movies on the lawn.
• Utilize the park's 9.6 acres of outdoor public space as an icon within the dense urban fabric of Midtown Manhattan.
• Generate memory social memory of the large, outdoor, public space.
• Establish connections to the adjacencies such as New York City Public Library.

Social Resilience

APPENDIX C Continued...

Diversity

4 (Regional)

• Bryant Park serves as an important socio-cultural identity within the New York City as a destination in Midtown New York, and a large piece to New York City's park system, which includes Central Park, one of the most recognizable parks in the world.

5 (Metro)

• The park's location between prominent between Fifth and Sixth Avenues and between 40th and 42nd Streets in Midtown Manhattan, New York City, allows the park to serve as an important iconic, urban space in an architectural dense city.
• Provides multiple spaces and activities for all age types to utilize.

6 (Site)

• Provides a diverse array of activities for resident in adjacent districts.
• The diversity of the context surrounding the park, allows for a greater social diversity. The mixture of office buildings, library, restaurants, apartments, condos and residences provides the park with multiple sources of economic capital. This keeps the park activated with many different types of people with many different types of social interactions.

Redundancies

7 (Regional)

• Provide an outdoor, urban civic space that serves the greater New York City area with substantial recognition within the park system.

8 (Metro)

• Provide amenities to the existing downtown demographics. Demographics include offices workers and residences. The urban civic space provides office workers with an outdoor retreat for lunch or break while residences utilize the park for walks, dog walks, and other outdoor recreation purposes.

9 (Site)

• Multiple spaces for diversity of activity.
• Formal design for organization of spaces.

Connectivity

10 (Regional)

• Create a regional destination with connections to the New York City Public Library, Times Square and Grand Central Station
• Maintain connections with city and civic leaders to keep the park updated through the public-private partnership, Bryant Park Corporation.

11 (Metro)

APPENDIX C Continued...

• Create a prominent destination between 5th and 6th Avenue and 40th and 42nd Street.
• Provide connections to the subway system that connects to parks not within walking distance.
• Create a center for social activity for the adjacent areas.
• Provide public transportation (bus) stops for connections outside of the park's walkable context.

12 (Site)
• Provide multiple pedestrian entrances that accommodate adjacency connections.
• The park's programming allows for a diverse array of social interactions between the users of the park. Visitors, office workers, residents, and people affiliated with institutions who utilize the park all interact in one urban, civic park.

Planning

13 (Regional)
• Create a urban, civic space that becomes an identity for people in multiple modes of transportation; car, bicycle, trolley, walking.

14 (Metro)
• Serve as an important pedestrian connection for those who work in the area and live in the area.
• Reduce the crime rates of the area by planning to remove drug activity and prostitution through the design.

15 (Site)
• Create a rich and dynamic visual, cultural and intellectual outdoor experience for New Yorkers and visitors alike.
• Enhance the real estate values of its neighbors by continuously improving the park.
• Burnish the park's statues as a prime NYC tourist destination by presenting a meticulously maintained venue for free entertainment events
• Help prevent crime and disorder in the park by attracting thousands of patrons, at all hours, thus fostering a safe environment.
• Create a public-private partnership to manage the park.

APPENDIX D

Klyde Warren Park Analysis Matrix

Klyde Warren Social Resilience Analysis Matrix			
	Regional	Metro	Site
Thresholds	X	1	1
Diversity	3	4	5
Redundancy	6	7	x
Connectivity	8	9	10
Planning	11	12	13

Extracted Goals and Methods for Social Resilience:

Thresholds

1 (Metro Scale).

• Provide an iconic park above the Woodall Rodger's Freeway for residents and visitors.

• Provide space for an increased population. Increased population generated by visitors, events, restaurants and food trucks, apartments and residencies for sale in nearby Museum Tower and Victory Park.

• Limit available parking to promote public transportation and walking as means of travel to and from the park.

• Reduce the dependency of fossil fuels by promoting bicycling and pedestrian activity as means of movement between districts the Downtown district and Arts district.

• Provide qualities unique to the surrounding areas by connecting the architectural elements and qualities of the Downtown district and the Arts district.

2 (Site Scale).

• Provide space for increased population during events such as races, parades, sporting activities, and movies on the lawn.

• Utilize park's identity over the freeway as an iconic space in downtown Dallas. The creation of a park above a highly active freeway, will generate social memory of the place.

• Provide multiple modes of transportation. Vehicular transportation on Woodall Rodgers Freeway remains as the park is built above the freeway. Adjacent vehicular modes remain, but are weakened as importance of transportation is placed on pedestrian movement through and around the park.

• Establish connections to the adjacent Arts district to extend arts into the park from the Dallas Museum of Art, and the AT&T Performing Arts Center.

APPENDIX D Continued...

Diversity

3 (Regional)

• Klyde Warren Park serves as an important socio-cultural identity within the Dallas/ Fort Worth area as a destination in downtown Dallas, large central piece to Dallas' park system.

4 (Metro)

• The park's location above a freeway, between two prominent districts in downtown Dallas, allow the park to serve as an iconic, urban civic space that creates an above Freeway experience like no other park in the region.

• Provides a space for multiple ages to utilize from casual walks to dog walks. The park caters to the young and the old through its' diverse array of activities.

5 (Site)

• Provides a diverse array of activities for resident in adjacent districts such as Downtown district and the Arts district.

• The diversity of the context surrounding the park, allows for a greater social diversity. The mixture of office buildings, museums, restaurants, apartments and condos provides the park with multiple sources of economic capital. This keeps the park activated with many different types of people.

Redundancies

6 (Regional)

• Provide an outdoor, civic space that serves the greater Dallas region as part of the large park system.

7 (Metro)

• Provide amenities to the existing downtown demographics. Demographics include offices workers and residences. The urban civic space provides office workers with an outdoor retreat for lunch or break while residences utilize the park for walks, dog walks, and other outdoor recreation purposes.

Connectivity

8 (Regional)

• Create a regional destination with connections to the American Airlines Center, AT&T Performing Arts Center, Dallas Museum of Art, Crow Museum, and Nasher Sculpture Center.

• Maintain connections with city and civic leaders to keep the park updated through the Woodall Rodgers Park Foundation.

9 (Metro)

• "Connectivity was an important consideration when Klyde Warren Park was built. Easily accessible by foot, trolley and bicycle from Uptown, Downtown and the Arts District, the park contributes to a more walkable city center" (Klyde Warren Park.org 2013).

Social Resilience

APPENDIX D Continued...

• Provide connections to Katy Trail, which connects other parks within the Dallas park system.
• Bridge the Downtown, Arts and Uptown District with a pedestrian corridor over the freeway.
• Create a walkable downtown Dallas by improving the connections with the deck park.

10 (Site)
• Provide a pedestrian connection with the trolley system that stops on North St. Paul Street.
• Establish a multiple pedestrian connections between the Dallas Arts District and Downtown District above Woodall Rodgers Freeway.
• The park's programming allows for a diverse array of social interactions between the users of the park. Visitors, office workers, residents, and people affiliated with institutions who utilize the park all interact in one urban, civic park.

Planning

11 (Regional)
• Create a urban, civic space that becomes an identity for people in multiple modes of transportation; car, bicycle, trolley, walking.

12 (Metro)
• Serve as an important pedestrian connection between the Central Business District, Uptown and arts District in downtown Dallas, Texas.
• Continue to provide vehicular access along perimeter streets, bisecting Olive Street, and Woodall Rodgers Freeway beneath.

13 (Site)
• Provide shaded pedestrian promenades to dampen the Texas heat.
• Provide a botanical garden for learning of native environments.
• Provide a children's garden with interactive water features for children to connect with the environment and cool off during hot days.
• Provide a reading room that accommodates all ages. Reading room shall allow visitors to share literature as they please.
• Provide an event lawn to accompany large crowds such as races and parades. The event lawn should also allow for frisbee, football, soccer and other large recreational activities.
• Accommodate a large public plaza that will connect the restaurant terrace, performance pavilion, casual take-out pavilion to Olive Street and an interactive fountain feature.
• Provide connections to restaurants that are adjacent to the park.
• Accommodate passive plazas, garden spaces and intimate garden courtyards.
• Provide a dog park for nearby residents to walk their dogs, engage with the outdoors and cool off in fountains during hot days.
• Provide vegetation buffers along the frontage roads to buffer activity on adjacent frontage roads.

APPENDIX E

Military Park Analysis Matrix

Military Park Social Resilience Analysis Matrix			
	Regional	Metro	Site
Thresholds	X	1	2
Diversity	X	3	4
Redundancy	X	5	6
Connectivity	7	8	9
Planning	X	10	11

Extracted Goals and Methods for Social Resilience:

Thresholds

1 (Metro Scale)

• Provide an iconic park within the heart between Rector Street, Broad Street and Park Place in Newark, New Jersey, to display Newark's ability to overcome social adversity.
• Provide outdoor public space for an increasing urban population.
• Reduce the urban heat island effect through the creation of a green roof over the parking garage beneath.
• Promote parking beneath the park to promote public transportation and walking as means of travel to and from the park.
• Provide qualities unique to the surround areas by connecting the architectural elements and qualities of the redevelopments in the adjacencies.

2 (Site Scale)

• Provide space for increased population generated from developing businesses and residencies.
• Utilize the park's 6 acres of outdoor public space as an icon within the dense urban fabric of Downtown Newark, New Jersey.
• Generate positive social memory of the large, outdoor, public space that once was identified with decay.
• Establish connections to the adjacencies such as Prudential and Panasonic.

Diversity

3 (Metro)

• The park's location between Rector Street, Broad Street and Park Place in Downtown Newark, New Jersey, allows the park to serve as an important iconic, urban space in an industrial city.
• Provides multiple spaces and activities for all age types to utilize, much like Bryant Park, New York City.

APPENDIX E Continued...

4 (Site)
• Provide activities for residents and office workers located around the park.
• As Downtown Newark, New Jersey continues to grow and redevelop its' once decaying infrastructure, the context surrounding the park will allow for social diversity.
• Prepare for in influx of people brought to the park by Prudential and Panasonic offices and Theater Square Development's residential units be brought to the park's adjacencies.

Redundancies

5 (Metro)
• Provide amenities for the existing and proposed downtown demographics. An increase in office workers and residents will generate a need for additional amenities such as the proposed café in Military Park.

6 (Site)
• Provide multiple spaces for diversity of social interactions.
• Maintain the cultural identity of the park.

Connectivity

7 (Regional)
• Maintain connections with city and civic leaders to keep the park updated through the public-private partnership, Military Park Partnership.

8 (Metro)
• Create a prominent destination between Rector Street, Broad Street and Park Place.
• Provide connections to Military Park Light Rail Station.
• Create a center for social activity for the adjacent areas.
• Provide public transportation (bus) stops for connections outside of the park's walkable context.

9 (Site)
• Provide multiple pedestrian entrances that accommodate adjacency connections.
• The park's programming allows for a diverse array of social interactions between the users of the park. Visitors, office workers, residents, and people affiliated with institutions who utilize the park all interact in one urban, civic park.
• Provide connections to Rutgers University-Newark, Aljira A. Center for Contemporary Art, Monsignor Doane Park, Trinity & St.Philip' s Cathedral, Newark School of Theology, YMCA, New Jersey Performing Arts Center, and US Army Recruiting Station.

APPENDIX E Continued...

Planning

10 (Metro)
• Provide workers, residents and students in the area as place to interact.
• Reduce the crime rates of the area by planning to renovate Military Park and surrounding areas that have been identified as areas of opportunity for redevelopment.
11 (Site)
• Create a new vibrant, lively identity for Newark while respecting its' cultural heritage.
• Create a rich and dynamic visual, cultural and intellectual outdoor experience for Newark residents and visitors alike.
• Generate prime real-estate adjacent to the park as Downtown Newark grows.
• Help prevent crime and disorder in the park by attracting thousands of patrons, at all hours, thus fostering a safe environment.
• Create a public-private partnership to manage the park, Military Park Partnership.

Social Resilience