IMPROVING THE USABILITY AND ACCESSIBILITY IN AGING RURAL COMMUNITIES

by

JAMES RIVERS

A REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF REGIONAL AND COMMUNITY PLANNING

Department of Landscape Architecture/Regional and Community Planning College of Architecture Planning and Design

> KANSAS STATE UNIVERSITY Manhattan, Kansas

> > 2014

Approved by:

Major Professor Katherine Nesse

COPYRIGHT

JAMES E. RIVERS

2014

Improving the Usability and Accessibility in Aging Rural Communities



Rural Policy for
Innovation in an Aging
Community
By James Rivers

Submitted to the Regional Community Planning Office of Kansas State University In Partial Fulfillment of the Requirement for the Degree Masters of Regional Community Planning

Improving the Usability and Accessibility in Aging Rural Communities

Proposal Submitted to the Regional Community Planning Office of

Kansas State University

In Partial Fulfillment of the

Requirement for the Degree

Of

Masters of Regional Community Planning

James Rivers

Manhattan, Kansas

April 25, 2014

Abstract

Abstract

Most adults have grown accustomed to the current design orientation of their communities; however, as adults grow older they will be hard pressed to maintain their current lifestyle and level of activity in their community.

This research identifies the importance of incorporating accessibility and usability elements into the streetscape of a community to encourage the integration of seniors into community life. One of the four pillars of the Main Street approach is design. This encompasses the design of building facades, streetscapes, and public spaces. This research looks at the Kansas Main Street program and investigates its success in furthering usability and accessibility of streetscapes in rural communities experiencing an aging population and infrastructure.

My thesis is if the Main Street organizations of Kansas were concerned about the access and use of streetscapes for elderly populations, their concern would be expressed in development plans and practices through their Main Street program undertakings.

Through this research, I have found that while rural communities see the value in accessible streetscapes their primary barrier to creating them is a financial one.

Table of Contents

ABSTRACT	6
INTRODUCTION	10
BACKGROUND	12
DILEMMA	16
METHOD	18
Sites Criteria	19
SITE ANALYSIS	20
Interviews	22
FINDINGS & RESULTS	24
FINDINGS SUMMARY	24
Interviews	99
ANALYSIS OF FINDINGS	102
CONCLUSION	103
APPENDIX	106

Introduction

Introduction

The demographic profile of the United States of America is shifting dramatically. America is getting older and this trend has become characteristic of many rural communities. This is a concern because rural communities are not adequately designed for service to their elderly populations (Rowley, 1996). The current built environment conditions disregard the physical limitations seniors face, rendering their living experiences less enjoyable and many instances, quite hazardous (Ghazaleh, Greenhouse, Homsy, & Warner, 2011). Planners are tasked with considering the use of land and design of the built environment such as streetscapes. At this time, the needs of the community are shifting and different population demographics will require new plans, policies, and strategies.

Streetscape access and mobility are important undertakings for city planners as well as important elements of streetscape design, one of the four pillars of the main street program approach. For over 30 years, the Main Street approach has transformed many rural downtown streetscapes. Streetscape design encompasses the design of building facades, streetscapes, and public spaces. Most adults have grown accustomed to the current design orientation of their communities; however, as adults grow older they will be hard pressed to maintain their current lifestyle and level of activity in their community unless there are adequate streetscape adjustments. Much of the literature on the subject of streetscape enhancements and livable communities focusses on a single group such as aging populations, families with children, or young professionals (Ghazaleh, Greenhouse, Homsy, & Warner, 2011). However, there are common community needs, interests, and concerns, which older

and younger citizens share, such as, safe and accessible walkways and streetscape amenities that are universally functional.

Universal design is an approach which planners can use to ensure needs of the whole community are adequately met, not just one age group. Universal design is an approach that takes into consideration the needs of all age groups throughout all stages of life. Streets can be safe places for people of all ages and abilities, whether on foot, in wheelchairs, or walkers.

The Main Street program has been a valuable tool for planners over the years for realizing streetscape projects. My thesis is if Main Street programs of Kansas looked at the issue of aging demographics as a serious concern, then the policies, strategies and undertakings of that Main Street organization would reflect that concern. The Main Street organization's concern about the access and use of streetscapes for elderly population would be expressed in development plans and practices through their Main Street program undertakings.

Through the use of streetscape site analysis audit and interviews with Main Street organization members, this report evaluates two rural Kansas communities' downtown streetscapes to determine if the Main Street program has furthered the accessibility and usability of the streetscapes in rural Kansas municipalities experiencing an aging population and infrastructure. Through this research, I have found that rural communities truly see the value and concern in providing accessible streetscapes for their elderly populations. However, the findings of this study show that certain barriers such as financial limitations restrict many undertakings from getting off the ground.

Background

Background

One of the four pillars of the Main Street program is the design of the streetscape of the primary road through the business district. If rural communities were concerned about the access and use of streetscapes for their elderly population, then these concerns would be expressed in development plans and practices through their Main Street programs. The Main Street programs are vital resources for communities throughout the United States. The Main Street program is no longer supported or funded by the state of Kansas however. Kansas' Main Street program, which was under the Commerce Department, was a popular resource since its inception in 1985 because it provided management training, consultation and dollars to small towns to revitalize downtown areas (Rothschild, 2012). This section describes the history of the Main Street program in Kansas, and how it can address the accessibility and usability concerns of rural streetscapes.

Main Street Program

A community's comprehensive plan should make downtown the easiest and most advantageous place for new development to occur—the community's values about design, land use, and economic development should cross-cut all aspects of the comp plan and shape all its components accordingly (Smith, 2005). If having a thriving downtown is important to a community, that goal will be reflected in the community policies and guiding principles. The same level of concern should also be focused on providing a safe and accessible community for older populations of a community. For small towns, the Main Street program makes good sense as a way to bolster the community's retail trade and services and to improve the

overall appearance of the downtown shopping area (Daniels, Keller, Lapping, Daniels, & Segedy, 2007, pp. 352-356).

Main Street is different from a Main Street® program. Main Street is simply a generic street name for the primary retail street or central business district (CBD) of a community or municipality. The Main Street programs, like those in Russell, Kansas and Peabody, Kansas, are part of a national movement of over 1,600 communities that have adopted an approach to revive their commercial core, strengthen business, control community-eroding sprawl, save historic buildings, and keep a sense of place and community life in America (The National Trust for Historic Preservation, 2014). Since the 1970's the Main Street movement has revitalized the way communities see their downtowns; cities and towns throughout the United States have benefited from the common-sense self-help approach of the Main Street program (Russell Main Streets Organization, 2014). Since the 1980s, Main Street programs have generated nearly \$17 billion in private and public investment and have rehabilitated more than 93,000 buildings. Each dollar spent on Main Street programs on average has generated another \$40 of investment (Daniels et al., 2007).

The Main Street program is committed to expanding the impact of main streets through the provision of research and resources and has been successful in about three out of every four towns (Daniels et al., 2007). The main street program is not a quick fix and many towns will lose their patience and abandon the Main Street approach within three years, while other towns fail to emphasize all four points (Daniels et al., 2007). The Main Street approach features four points—organization, promotion, design, and economic restructuring that work to help create new business, a greater investment in the community, refurbish storefront, and create a greater sense of community and pride (Daniels et al., 2007).

Organization

The first element of the Main Street approach is organization. Successful main street programs require a high level of collaboration and discipline to promote uniform store hours, parking and security (much like a mall), and to put on special events (Daniels et al., 2007). Typically, a town will elect a board or coordinator to establish a nonprofit downtown association, which will work with business owners, local government, and the public on main street decisions. Funding is an important element of the Main Street organizations responsibilities to manage, and can come from local and state governments, private contributions, and private foundations (Daniels et al., 2007). The association's main purpose should be to build consensus and cooperation to create consistent day-to-day management of the downtown as well as planning for the future (Daniels et al., 2007).

Promotion

Promotions consist of advertising the downtown as a special place to shop, live, and work, which includes publicity about the downtown and the staging of special events to bring people into the downtown (Daniels et al., 2007).

Design Goals

Design goals focus on improving the visual aesthetic and value of the main street. Reinvestment into rehabilitating and maintaining older buildings and streetscapes helps the downtown become more welcoming to visitors and local inhabitants for shopping, working, and entertaining. These aesthetic improvements also improve accessibility and usability for people of multiple abilities and disabilities.

Economic Restructuring

Economic restructuring— achieved through creating a better mix of stores and businesses and modernizing marketing methods—has the goal of maintaining, strengthening, and diversifying the town's economic base (Daniels et al., 2007).

Kansas' Main Street Program

The Kansas Main Street program was an economic engine for Kansas communities, helping them to define who they are, preserve their heritage and traditions and shape their future (Russell Main Streets Organization, 2014). The Kansas Main Street program helped with technical guidance, periodic training in such areas as fundraising and historic preservation and zero-interest matching loans of up to \$20,000 to help small businesses under a program called Without Walls (The Associated Press, 2012). These funding opportunities supported many small rural communities, but are now no longer available. In September 2012, the Kansas Commerce Department Secretary announced the elimination of the 27-year-old Kansas Main Street program as part of a department restructuring that resulted in 18 layoffs (The Associated Press, 2012). Due to the pulling of the Kansas Main Street program funding, the existing Main Street programs are no longer officially Main Street programs, but simply organizations that are using the Main Street approach.

The Main Street program's design approach pillar encompasses streetscape accessibility and usability. This report investigated the streetscape usability and accessibility of Russell, Kansas and Peabody, Kansas. Usability is the ease of use and learnability of a human-made objects or environment. It is intuitive and easy to learn. The degree to which a service or environment is available to as many people as possible is accessibility. To evaluate

usability and accessibility in streetscape I identify an approach that encompasses both elements in its application; universal design.

Universal Design

"Universal design is an approach to create simple to comprehend and intuitive design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability, or disability" (Centre for Excellence in Universal Design, 2013). I measured Russell and Peabody's access and usability effectiveness by drawing from the Universal Design New York (UDNY2) guidebook, which provided the best practice design strategies for implementing universal design. The philosophy of universal design is that "when an environment is accessible, usable, and convenient and a pleasure to use, then everyone benefits" (Centre for Excellence in Universal Design, 2013). Universal design principles can be applied to buildings, products, services, or environments and should be designed to meet the needs of all people who wish to use it. Universal design strategies are not special requirements for the benefit of only a minority of the population, like with the Americans with Disabilities Act (ADA) requirements. Instead, universal design is considered a fundamental condition of good design (Centre for Excellence in Universal Design, 2013). According to the Centre for Excellence in Universal Design, Universal design is based on seven principles:

- Equitable use;
- flexibility in use;
- simple and intuitive use;
- perceptible information;
- tolerance for error;

- low physical effort;
- size and space for approach and use.

These principles for universal design help to guide the design of environments, products, and communications. They are also often used in evaluating existing designs, help guide the design process and educate both designers and consumers on characteristics of more usable products and environments (Centre for Excellence in Universal Design, 2013).

Those who may have a harder time, such as handicapped or elderly individuals, benefit greatly from the implementation of universal designs. "Universal design is an inclusive design solution and promotes accessibility and usability for people of all levels of ability to live independently" (Centre for Excellence in Universal Design, 2013).

Compatibility of Universal Design and the Main Street Approach

Those who may have a harder time, such as handicapped or elderly individuals, benefit greatly from the implementation of universal designs. With universal design, building facades, public spaces, and streetscapes can be transformed to ensure usability and accessibility for a community's older inhabitants. Many adults who classify as "baby boomers" are, for the most part, still able to navigate their communities. However, as time passes, physical abilities will wane, and their lifestyles as well as their level of activity will depend on the accessibility and usability of their environments. This research identifies the importance of incorporating accessibility and usability elements into the streetscape of a community to encourage the integration of seniors into community life. It would be logical for communities like Peabody,

Kansas and Russell, Kansas—communities where the median age is above the State's—to be in favor of universal design strategies for its main street streetscapes.

One of the four elements of the Main Street approach is design. Design goals focus on improving the visual aesthetic and value of the main street. Reinvestment and rehabilitation into older buildings and streetscapes helps the downtown become more welcoming for shopping, working and entertaining. The revitalization of a neglected commercial district or residential neighborhood often begins with simple improvement changes such as streetscape furniture, or new paint job; this often stimulates similar improvements in neighboring buildings (Facca, 2013).

Façade and streetscape improvement initiatives encourage property owners and businesses to improve the exterior appearance of their buildings and storefronts. Streetscape and facade improvements may seem to be a minor aspect of the Main Street approach but it helps to strengthen economically locally owned businesses, which helps keep dollars in the local economy (Facca, 2013). Streetscape improvements are a valuable element to main street's economic health and social health. If aesthetic improvements were also focused on improving universal accessibility and usability, main streets would continue to be safe and hospitable for shopping, working, and entertaining older populations.

Dilemma

"People of diverse abilities should be able to find their way easily, use buildings and places comfortably and safely, as far as possible without special assistance" (Centre for Excellence in Universal Design, 2013, p. 6). The purpose of this report is to identify if the Main Street program in Kansas furthered the accessibility and usability of the streetscapes in rural Kansas towns. This question is pertinent because the demographic profile of America is "greying" and with that comes populations with decreased reaction time and other physical limitations. The elderly's ability to access and use the places and services in their community will become more difficult unless the community is properly designed to accommodate individuals of varying abilities, ages, and conditions. As individuals age and lose their physical capabilities, small impediments like curbs can become obstacles to their mobility.

Other individuals have research various aspects of aging in place policy, primarily with elderly housing. My report focuses on providing a safer, usable, and accessible streetscape by following the universal design approach. Universal design is a successful approach for implementing intuitive design elements into all types of disciplines. This report uses universal design approach as a measure to evaluate accessibility and usability in the built environment. This was to identify whether or not accessibility is a priority for Russell and Peabody, Kansas' Main Street programs. Moreover, if they are concerned about the safety and ease of access of the elderly population, I want to know what steps they have or will take to ensure all their individuals have the ability to safely and confidently navigate their community. In this report, I conduct interviews and implement downtown streetscape audits to answer the question:

Has the Main Street program furthered the accessibility and usability of the streetscapes in rural Kansas municipalities and if not why not?

By implementing a downtown streetscape audit for each of my two locations, Russell, Kansas and Peabody, Kansas, I identified and evaluated the streetscape elements and determined the current accessibility and usability of each locations downtown. By conducting interviews, I discovered what future undertakings each Main Street organization plans for streetscape accessibility and usability in their communities.

Methodology

Method

In order to evaluate if the Main Street program has advanced the accessibility and usability of rural Kansas streetscapes I implemented multiple methods of analysis. The data collection was done in the form of secondary data analysis, streetscape site-analysis audit, and interviews with representatives from the Main Street organizations of Russell, Kansas and Peabody, Kansas.

The first part consisted of a literature analysis to identify definitions and form a context for themes within the report. Theories, ideas, and approaches were explored from a wide range of literature sources.

This analysis explored secondary sources such as books, periodicals, and scholarly journals to define what an aging community and rural community are, as well as, accessibility and usability. I explored the universal design approach and reviewed the Main Street program; its four-point approach and its history in Kansas.

The second part identified the sites of study. One of the methods utilized in this report to evaluating the furthering of accessibility and usability in streetscapes by Kansas' Main Street organizations is to conduct a streetscape site analysis in multiple study areas. A set of criteria was then created to identify sites of study that would best represent elements in my question.

A set of methods were then established to audit the streetscapes of these communities. The site analysis will begin with identifying the elements that demonstrate usability and accessibility effectively in streetscapes. I will evaluate my sites accessed and usability effectiveness by sampling from the Universal Design Audit Checklist— from the Universal Design New York (UDNY2) guidebook—to help me create a framework for my own audit of Russell, Kansas and Peabody Kansas. The guidebook introduces the concept of universal design and provides many guidelines for implementing the principles of universal design in a myriad of built environment streetscapes. Universal design is an effective approach to create an intuitive design for all peoples, especially elderly, my target demographic. Universal design approach brings out the most accessible and usable features for each streetscape element.

I narrowed the focus of my audit to evaluate streetscape elements. My streetscape audit checklist focused on seven of the multiple elements explored in the UDNY2 audit. The checklist is featured in the appendix as well as maps of each of the blocks evaluated.

Finally, I supplemented my site analysis by conducting interviews with representatives from each community's Main Street organization. By conducting interviews, I discovered what future undertakings each Main Street organization plans for streetscape accessibility and usability in their communities. The interviews were conducted in person and via email. Multiple board members and community leaders were identified; however, each community introduced their own representative to talk on their behalf. The purpose of the interviews is to find out about the Main Street organization's current initiatives, their plans and the reasons behind their activities. The interviews will also reveal the organizations future goals, and community focus. The interview process was casual and questions asked stayed pertinent to the streetscape plans, endeavors, and undertakings of each community.

These research methods examined the real-life situations on the ground of Russell, Kansas and Peabody, Kansas and explored possibilities and options in a real-life context. Using these methods, I identified and evaluated the streetscape elements and determined the current accessibility and usability status of each sites downtown.

Sites Criteria

In order to answer my question I had to select sites to conduct interviews and site analysis. It was imperative to have specific site criteria to narrow the potential study sites to those, which best represent what I was looking to discover. The report focused on accessibility in rural town's streetscapes in aging communities and needed to explore sites, which represented those elements. I was able to narrow the possible sites by the size of the town and its median age. I also wanted to study the Main Street programs that have some history in the state but are still influencing policy in their towns.

In addition, I wanted to study organizations that are focused on the Main Street approach, not just a part of a portfolio of things the organization did. Main Street programs vary considerably across the state. Some Main Street programs are entities of their own and others are programs within another governmental body, such as a chamber of commerce or the municipal governmental body. These co-existing Main Street organizations cannot be measured on their own merits because they are not self-directed. This research requires that I focus on a site that features its own independent Main Street organization. Russell, Kansas and Peabody, Kanas have independent Main Street organizations, which are, self-directed and self-governing bodies.

Finally, I needed to be able to assess them easily. My two towns of study are, Russell, Kansas and Peabody, Kansas. They are longstanding participants of the Kansas Main Street program and have continued to follow the Main Street approach even after the State cut the program. Their commitment to continue with the Main Street approach, and being representative of specific demographic criteria I have identified led me to choose them for my sites of study.

The sites had to:

- Be established under the Kansas Main Street program and still be in operation;
- Have a population under 5,000;
- Be within a reasonable driving distance (approximately 2 hours from Manhattan) for observational study and interviews;
- Have a median age above the state of Kansas' median age;
- The Main Street program had to be independent of Chamber, City or other organizations.

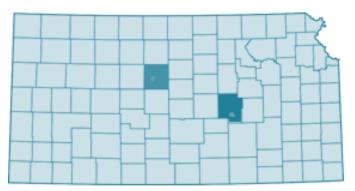


Figure 1 Russell, Kansas and Peabody, Kansas

In order to conduct a study on the Kansas Main Street program I had to use sites that were a part of the program and currently still active. The Main Street organization of both, Russell, Kansas and Peabody, Kansas, still play an active role in their community, even though the official Kansas Main Street program had been cut by the state. Typically, rural communities, for lack of an abundance of resources and finances, have a reputation for not undertaking frivolous projects. Therefore, their undertakings are typically focused and intentional. Subsequently, I chose to select from communities of a population less than 5,000 to fit the rural profile. This coincides with my goal to identify where rural communities prioritize the aging demographics issue in their Main Street programs. Population age is at the core of the research, thus the sites chosen must feature relatively older age demographic than that of the state average. Therefore, the site selection was to have a median age above the state of Kansas. Needing to have to travel to each of

my two sites of study to conduct a thorough site analysis, the sites had to be relatively close for a proper streetscape audit and interviews. In order to accomplish this within my time line I selected locations within a two-hour radius, which was a reasonably close distance to travel for a day trip for analysis. Peabody and Russell Kansas are within a two-hour drive a reasonable distance to travel in a day, conduct interviews and streetscape site analysis audit, and limit expenses and time off work.

Site Analysis

I began my research by conducting a site analysis of my two chosen communities, Peabody, Kansas and Russell Kansas. In my site's streetscape analysis, I evaluated the accessibility and usability of rural streetscapes: building access points, way finding, streetscape furniture & amenities, walkways and crosswalks.

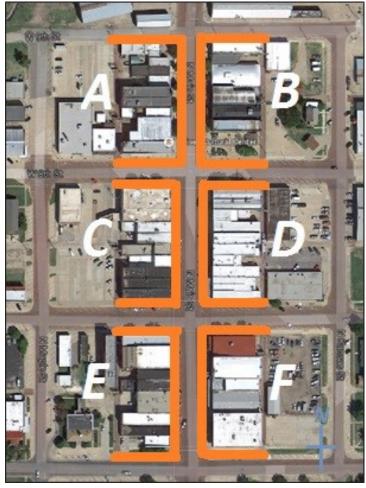
The first step of the site analysis was to conduct a literature review on both sites of study, Peabody and Russell Kansas. A literature review provided me with a community background to better understand the conditions and driving forces. This step will helped gain insight on the communities' character; become familiar with their streetscape layout and identify their goals and vision.

Next step was to establish a criteria checklist for evaluating the sites usability and accessibility effectiveness, and then conduct the evaluation. I chose to use the Universal Design Audit checklist, from the UDNY2 guidebook, as a guide for preparing my checklist. The checklist I produced is similar to the UDNY2 guidebook audit, but mine narrows down the streetscape elements to evaluate (existing walkways and crosswalks, building access points, way-finding signs, and streetscape furniture and amenities). I chose which streetscape elements to evaluate from the UDNY2 audit list, which best measures streetscape accessibility and usability, then selected which features I would be using to grade the usability and accessibility of those selected streetscape elements. I feature the checklist within the appendix. Utilizing an audit checklist while on site, I evaluated the level of accessibility and usability of each streetscape elements by checking and noting details of the multiple features for each streetscape element. The audit

evaluation consisted of multiple notes, photographs, and follow up visits. I took photographs of each element feature at both sites to use as reference examples of current on-site conditions. Then I compared Russell and Peabody's streetscape elements by identifying how abundant the features are at my sites.

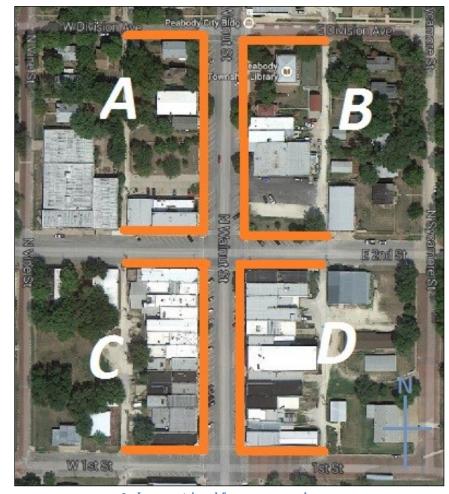
After completing the evaluation at my sites, Peabody and Russell, I compared and contrast the usability and accessibility of each community's streetscape. I ideally was searching for streetscape elements, which had multiple usability and accessibility features. However, most of the findings showed either no basic assess compliance, or basic assess compliance, and one or two additional features. The final comparisons and analysis gauges the emphasis Main Street organizations of Kansas have put on accessibility and usability of the streetscapes and give context to the other research methods conduct.

Russell, Kansas: Study Boundary of Streetscape Audit



2: Image retrieved from maps.google.com

Peabody, Kansas: Study Boundary of Streetscape Audit



3: Image retrieved from maps.google.com

The streetscapes to be observed, recorded, and evaluated are highlighted in orange. The site analysis will audit all seven streetscape elements—walkway textures & obstructions, artificial illumination, vertical walkway circulation, streetscape amenities, pedestrian crossings, and way-finding signage—for each block of the four-block study area. Blocks are identified by its corresponding alphabet letter ID

Interviews

The Final step in my process was to conduct interviews. My interviews helped determine the focus of each main street program, what the current circumstances are, and understand the organizations future goals and plans to further the universal access and use of their streetscapes, and if not, why. I interviewed individuals who were knowledgeable in Russell and Peabody's Main Street programs. Both Main Street organizations sent out a representative to talk with me about their organization. A sample of my interview questions are in the appendix. These questions were the foundation for my face-to-face and email interview scripts for my first interactions. These questions began the conversation and answered basic questions I needed to identify the focus of each study site. These questions are not listed in any particular order, but are simply sample questions, which were used while interviewing Main Street organization representatives in Peabody and Russell.

The interview questions revealed the level of commitment that the two Main Street organizations have for elderly accessibility and usability of downtown streetscapes and the integration of solutions to fix any deficiencies. At the conclusion of my interviews, I determined the progress that both Russell and Peabody have made. I discovered what barriers existed that held back the Main Street organization from implementing streetscape improvements and identified what future goals each Main Street organization has for the future of their downtown streetscapes. The appendix features an initial interview email template, which invites interviewees to the process.

Prospects and Anticipations

At the start of this report, I anticipated to uncover one of four differing scenarios at my sites, Russell, Kansas and Peabody, Kansas:

- 1. Either the town has accessible streets and accessible street design is not a priority;
- 2. The town has accessible streets and accessible street design is a priority;
- 3. The town does not have accessible streets and accessible street design is not a priority;

4. Or the town does not have accessible streets and accessible street design is a priority.

The interesting part of the research was discovering and explaining why these combinations occur. I expected to discover that both Russell and Peabody's Main Street programs would have accessibility and usability streetscape elements present in their community from recent undertakings. I assumed that both communities saw aging communities as a significant concern and development decisions were based in part on that premise.

Findings

Findings & Results

This chapter will display the findings made from my onsite field observations and interviews in both Russell and Peabody Kansas. These field observations evaluated the accessibility and usability of my site's downtown streetscapes. The streetscape audit and interviews helped to identify what steps these towns and their Main Street organizations have taken to ensure elderly individuals have the ability to safely, and confidently navigate through their community. I display the findings of the streetscape site audits and accompanying interviews with Main Street organization's representative in textual and non-textual descriptions.

I begin with analyzing the streetscape elements evaluated in my audit. For each streetscape element, I examined specific features, block-by-block, noting their physical state, configuration, and adherence to universal design criteria. I then outline my findings from my interviews with Main Street organization representatives from my sites.

Streetscape Elements Audit

I evaluated the accessibility and usability of Russell and Peabody, Kansas' downtown streetscapes by auditing features of specific streetscape elements. I utilized an audit checklist while on-site checking and noting feature details of the multiple streetscape elements. The audit evaluation consists of multiple notes and photographs to point out current conditions. I examined seven streetscape elements in my audit:

- Vertical walkway circulation
- Way-finding & signage
- Streetscape furniture and amenities
- Pedestrian crossing zones
- Artificial illumination
- Walkway obstructions
- Walkway textures and integrity

These streetscape elements are sampled from the UDNY2 guidebook, which utilizes the universal design approach to grade the usability and accessibility for a variety of built environments. In this section, I objectively

present the results of my findings to identify the level of accessibility and usability of each streetscape element. I will identify if a streetscape element possesses multiple usability and accessibility features, basic access compliance, or no basic access compliance for each block of my study areas.

Findings Summary

Peabody

Many of the streetscape elements evaluated in Peabody were lacking accessible and usable features. Multiple streetscape elements were below the audit standards used to make the evaluations. There were elements, which had basic access compliance features; however, there were very few instances of multiple usability features present for any streetscape element.

When examining the walkway elements such as textures and obstructions, there was a significant difference in the walkway textures block by block. I divided the analysis of the blocks in Peabody up into halves due to the great inconsistency of the walkway conditions on each block.

The first block examined, block A, contained the most variation in walkway features and integrity. Along Division Avenue— the side street to the north— had no sidewalk pavement of any type available for pedestrian circulation. An established sidewalk was present along the Walnut Street section of the northern half of the block. This northern half of the block that did have an established walkway was paved with brick pavers. These brick pavers were heavily eroded and deteriorated. Multiple cracks and holes were present the walkway of that section of block A. These holes and cracks in the pavement created poor drainage for water and snow, which potentially could lead pedestrians to slip and fall. The walkway surface was also potentially hazardous because of the uneven surface due to tree lifts of the brick pavement. There was also substantial over growth of weeds and vegetation between the cracks and along the pathway edges. Pathways are wide and feature distinguishable boundaries. When the weeds are overgrown, this creates trip hazards for pedestrians who are hard of seeing and narrows the pathway, limiting circulation flow.

The southern end of block A was very much the opposite. Smooth and level concrete sidewalks paved the walkway. The concrete sidewalks were free of large cracks and holes and well maintained. Street and walkway

boundaries were clearly distinguishable even at parking lot access points. The southern end of block A was free of other trip hazards such as leafs and fallen branch debris which were present at the northern end of block A.

Block B walkways were similar in state and features to block walkways. The northern half of block B was in good condition, however the southern end was in poor condition. The walkway of the northern half was paved with smooth concrete along Division Street and brick pavers along Walnut Street. The brick pavers along the northern half of block B were free of heavy erosion and deterioration. However, the integrity of the southern half of block B was poor. The neglected brick pavers featured large holes, cracks, and overgrowth of weeds.

The other two blocks were in a substantially better condition than block A and B. Block C and D were both completely paved with concrete. Both walkways are wide and can accommodate heavy foot traffic. Concrete walkways surface featured very few large holes or cracks in comparison to the brick paved walkways; however, there are still many small holes and cracks present, especially along block C's walkways. Loose sand and soil, possibly due to snow management, dusted the sidewalks of both blocks C and D, creating a potential slip hazard. In general, the integrity of the walkways along block C and D are in good shape and are well maintained.

Each block featured multiple trees, flowerbeds, and planters. The amenities were evaluated based on their type, abundance, and placement. Other amenities included benches and seating features. Amenities, like landscaping, was a problem area for blocks A and B, but proper maintenance and placement of landscaping and streetscape amenities can be a plus for the streetscape. Vegetation overgrowth along the walkways was a problem for Blocks A and B. The overgrowth of weeds obstructed traffic flow along the walkways. The trees along the main street are plentiful; however, they are clumped together and not evenly distributed. Some blocks have multiple trees while others would have just a few. Planters and flowerbeds are predominantly featured on blocks C and D. The planters add an aesthetic appeal, as well as distinguish a visual boundary in addition to the curbing, that separates pedestrian pathways from vehicle parking. Benches and trashcans were predominately featured on blocks C and D and nonexistent on the other blocks.

When evaluating the artificial illumination I observed the streetlight distribution, lighting for landmarks or street features, and pedestrian crossing lighting. Streetscape illumination in addition to standard streetlights was nonexistent with the exception of landmark lighting for the memorial park on block A. No additional street lamps were present in Peabody and so the streetscape was dependent on four standard streetlights per block to illuminate the main street. The side streets of Second Street and Division Avenue did not feature any street lighting. Lighting at crosswalks was not illuminated any more than the rest of the downtown blocks. Streetscape lighting for downtown Peabody was deficient.

There were multiple instances of vertical circulation. For vertical walkways circulation I observe the mobility, safety aspects, and incline indicators of the streetscape element features. In order for vertical circulation features to correspond with universal design principles, alternative entry points should share, or be near common entryways. The entrance to the Peabody State bank and the Peabody post office featured a one-stair step-up, with an attached ramp feature for mobility-restricted pedestrians. This is an excellent feature in that any pedestrian regardless of mobility can access the same entry point. Inclines were marked with contrasting paint colors to alert pedestrians of change in elevation and railing is installed to help guide pedestrians up the steps and ramp. The other building entrances on all other blocks do not feature alternative vertical walkways near the common entryway. All other entryways have multiple step stairway entryways, no-step entryway, or a slight slope entry. Block D features two building entrances, the drug store, and the senior center, which feature a sloped entrance. Block C features multiple businesses with a nostep entryway; all other building entrances are one-step threshold entrances. There are two building entrances, which feature multiple steps, which are relatively steep and lack safety railing.

Russell

The streetscape of Russell was very consistent throughout the site. The walkways of all the blocks were in very good shape. The walkways were smooth and clear of debris and vegetation overgrowth. There were very

few cracks, holes, or tree lifts on any of the blocks studied. There were a few large cracks and holes on a few blocks but many of these hazards have been marked by the city with contrasting paint to warn pedestrians and repair later.

Crossing distances were not shortened for pedestrians with bulb outs or pedestrian islands; however, there are clear indications of pedestrian crossing zones as they are indicated with painted lines along the roadway and ramps within the curb cuts for easy access. Russell had lighted street signals that indicated safe times for pedestrian crossing. Russell does not have signs indicating a pedestrian crossing zone. Signs for street names and way finding signs are present on most blocks; however, they are small and challenging to read at far distances.

Each block in Russell featured multiple trees, flowerbeds, benches, trashcans and planters. Just like Peabody, the amenities were evaluated based on their type, abundance, and placement. Vegetation overgrowth along the walkways was never really a problem for the blocks in Russell. There were at least four trees along main street on every block and four or five benches, trashcans and planters for each Russell block. These features were evenly distributed and not clumped together.

I observed the streetlight distribution, lighting for landmarks or street features, and pedestrian crossing lighting. Russell had multiple streetlights per block and had additional historical lampposts for added illumination. Streetscape lighting for downtown Russell was above adequate.

For vertical walkways circulation I observe the mobility, safety aspects, and incline indicators of the streetscape element features. Building entrances on all blocks were predominately no-step entryways, or a slight slope entry. Only a few blocks had entrances, which featured one or multiple steps for building entrances. Blocks B, C, D and E, each featured step-up building entryways from the sidewalk.

Peabody, Kansas Streetscape Audit

Peabody, Kansas Streetscape Audit

Streetscape Element to Evaluate

Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Block A: Northern Half

- No pavement of any type
- Paved with deteriorated bricks due to erosion

Examining: Tread Path Integrity Design

Features

- Multiple tree lifts
- Poor drainage
- Uneven walkway surface
- Substantial over growth of weeds present
- Leafs & fallen branch debris from trees

Block A: Southern Half

- Paved with a smooth concrete
- Walkway is wide for heavy foot traffic
- Walkways surface featured very few holes
- Very few cracks or tree lifts
- Integrity of the walkway is in good shape

North Half















Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Examining: Tread Path Integrity Design Features

Block B: Northern Half

- Brick pavers in good condition
- Smooth concrete with minimal cracks
- Good drainage
- Walkway surface joints are even
- Walkway is free of vegetation over growth
- Fallen leaves, branch and other debris is cleared from walkway

Block B: Southern Half

- Paved completely with brick pavers
- Majority of brick pavers broken or heavily eroded
- Many breaks, cracks, and holes.
- Walkway is wide for heavy foot traffic

North Half

















Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Examining: Tread Path Integrity Design Features

Block C: Northern Half

- Paved with a smooth concrete
- Walkway joints are even and match up
- Very few cracks and holes
- Walkway is wide for heavy foot traffic
- No Tree lifts
- Integrity of the walkway is in good shape

Block C: Southern Half

- Uneven walkway surfaces and concrete joints don't match up
- Some over growth of weeds present; potential trip hazard
- Sand from winter road treating covers walkway; potential slip hazard
- Multiple patched sections to repair damaged pavement

Northern Half





















Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Examining: Tread Path Integrity Design Features

Block D: Northern Half

- Large cracks on 2nd street corner
- Smooth concrete walkway
- Even walkway surface
- Clean walkway free of sand and other debris
- Wide walkways for heavy foot traffic
- Very few cracks
- Integrity of the walkway is in good shape

Block D: Southern Half

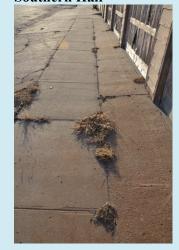
- Paved with a smooth concrete
- Substantial over growth of weeds present on 1st street
- Walkway is wide for heavy foot traffic
- Walkways surface featured very few holes
- Very few cracks
- Integrity of the walkway is in good shape

Northern Half





Southern Half





Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block A: Northern Half

- Edges of pathway are not defined; No pavement of any type on Division Street
- Eroded and deteriorated brick walkway w/ multiple cracks and holes
- Multiple tree lifts
- Poor drainage
- Uneven walkway surface
- Substantial over growth of weeds present
- Leafs & fallen branch debris from trees

Block A: Southern Half

- Paved with a smooth concrete
- Walkway is wide for heavy foot traffic
- Walkways surface featured very few holes
- Very few cracks or tree lifts
- Integrity of the walkway is in good shape

Northern Half











Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block B: Northern Half

- Smooth walkway surfaces; pavement joints are even and match up
- No impediments to pedestrians
- Curb cuts are used at major points of access

Block B: Southern Half

- Lack of clear walkway boundaries near grocery store entrance
- Width of pathway appropriate for expected circulation volumes
- Edges of pathway over run with vegetation overgrowth
- Deteriorated walkway has many holes and cracks; trip hazards

Northern Half













Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block C: Northern Half

- Edges of pathway well defined with curbing
- Smooth concrete surface with very few cracks and holes
- Even walkway surface; joints match up

Block C: Southern Half

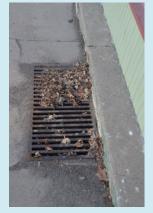
- Paved with a smooth concrete
- Multiple cracks and holes in concrete
- Flower beds and planters obstruct walkway circulation
- Some over growth of weeds present; trip hazard

Northern Half











Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block D: Northern Half

- Edges of pathway well defined with curbing
- Smooth concrete surface with very few cracks and holes
- Even walkway surface; joints match up

Block D: Southern Half

- Paved with a smooth concrete
- Walkway is wide for heavy foot traffic
- Over growth of weeds present along 1st street walkway
- Walkways surface featured very few holes or cracks
- Edges of pathway are not defined on 1st Street

Northern Half







Southern Half





Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block A:

- Alternatives to stairs are present in two locations:
 Peabody bank and the post office
- Main access point is shared with stair alternatives
- Stair alternatives feature ramps with handrails
- Ramps and stair transitions are marked with contrasting indication colors
- Stairs and ramps do not feature slip resistant traveling surfaces
- Tactile indicators on railing such as groves or bumps are not present
- Northern half staircases do not have handrails











Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining:
-Mobility
-Incline
Indicators
-Safety

Block B:

- Alternatives to stairs are present for the Morgan House Museum (accessible entry at building rear)
- Stairs and ramps do not feature slip resistant traveling surfaces
- Tactile indicators on railing such as groves or bumps are not present







Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

- No alternatives to stairs are present
- Stairs do not feature slip resistant traveling surfaces
- Railing present at one of four entry points with staircases
- Tactile indicators on railing such as groves or bumps are not present
- Most of the building entry points have no step up to enter building.
- Some entryways have a one-stair step up to enter building













Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block D

- No alternatives to stairs are present
- Stairs do not feature slip resistant traveling surfaces
- "Step up" entry points are indicated with contrasting paint colors
- The drug store has a smooth inclined entrance for easy accessibility
- Railing for staircase present only at restaurant entry point on 2nd street
- Tactile indicators on railing such as groves or bumps are not present
- Most of the building entry points have no step up to enter building
- Some entryways have a one-stair threshold to enter building















Streetscape Element Features Evaluation

Streetscape Lighting: Artificial Illumination

Block A:

Examining:

- Light posts are adequately distributed throughout block
- -Streetlight
 Distribution
- There is no streetscape lighting in addition to the streetlight posts
- -Landmark/Feature Lighting
- Extra lighting is present at landmark memorial park
- -Pedestrian Crossing Lighting
- No lighting features to emphasize way finding signs or building entry points
- The four-way red flashing traffic light is the only traffic light in study area
- Light post placement is prioritized along the Main Street and intersections less lighting if any along side streets
- Most intersections and crossing zones are adequately illuminated for pedestrians







Streetscape Element Features Evaluation

Streetscape Lighting:

Artificial Illumination

Examining: -Streetlight Distribution -Landmark/Feature Lighting

-Pedestrian Crossing Lighting

Block B:

- Light posts are adequately distributed throughout block
- There is no streetscape lighting in addition to the streetlight posts
- No lighting features to emphasize way finding signs or building entry points
- The four-way red flashing traffic light is the only traffic light in study area
- Light post placement is prioritized along the Main Street and intersections less lighting if any along side streets
- Most intersections and crossing zones are adequately illuminated for pedestrians





Streetscape Element Features Evaluation

Streetscape Lighting:

Artificial Illumination

Examining: -Streetlight

- Distribution
- -Landmark/Feature Lighting
- -Pedestrian Crossing Lighting

- Light posts are adequately distributed throughout block
- Standard streetlights used; There is no streetscape lighting in addition to the streetlight posts
- No lighting features to emphasize way finding signs or building entry points
- The four-way red flashing traffic light is the only traffic light in study area
- Light post placement is prioritized along the Main Street and intersections less lighting if any along side streets
- Most intersections and crossing zones are adequately illuminated for pedestrians











Streetscape Element Features Evaluation

Streetscape Lighting: Artificial Illumination

Examining:
-Streetlight
Distribution
-Landmark/Feature
Lighting
-Pedestrian Crossing
Lighting

Block D:

- Light posts are adequately distributed throughout block
- There is no streetscape lighting in addition to the streetlight posts
- No lighting features to emphasize way finding signs or building entry points
- Light post placement is prioritized along the Main Street and intersections less lighting if any along side streets
- Most intersections and crossing zones are adequately illuminated for pedestrians









Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Examining:

- -Furniture **Placement**
- -Landscaping -Amenities

Block A:

- No Garbage cans or recycle bins
- Placement of streetscape features lacking on block A
- No Seating Areas for resting provided at intervals
- Amenities are along accessible path, have wheelchair clearance space
- Well-designed flowerbed along Peabody bank
- Amenities are located to the side of the direct path of travel.
- Planter is featured on block

















Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Block B:

Examining:

- -Landscaping -Amenities

- -Furniture Placement

- No Garbage cans or recycle bins
- No placement of streetscape features provide except for flower beds and trees
- Only one bench for seating







Streetscape Element Features Evaluation

Streetscape **Furniture &**

Amenities

Examining:

- **Placement**
- -Landscaping -Amenities -Furniture

- Evenly distributed availability and placement of the Garbage cans, benches for seating, and planters for aesthetics
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Very few trees on block but are evenly spaced

















Streetscape Element Features Evaluation

Streetscape **Furniture &**

Amenities

Examining:

- -Landscaping
- -Amenities
- -Furniture
- **Placement**

Block D:

- Evenly distributed availability and placement of the Garbage cans, benches for seating, and planters for aesthetics
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Very few trees on block
- Bike rack available

















Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic
- Light -Crossing
- Impediments
 -Curbing/Ramps
- -Integrity

Block A:

- No Street- signals for pedestrians
- No street light for pedestrians
- Street-markings for pedestrians are present; white painted lines indicate crossing zones
- No Bump Outs or pedestrian islands utilized
- Curb Cuts are present at crosswalks but not all major points of access
- Pedestrian crossing distances are normal lengths and have not been reduced by providing expanded corners and/or safety islands
- Storm drains are not located outside marked crossings.
- Crossings are not marked permanently with special materials or a change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)
- Lack of crossing on north end of block











Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing **Impediments**
- -Curbing/Ramps
- -Integrity

Block B:

- No pedestrian crossing signage
- No Street- signals for pedestrians
- No street light for pedestrians
- Street-markings for pedestrians are present; white painted lines indicate crossing zones
- No Bump Outs or pedestrian islands utilized
- Curb Cuts are present at crosswalks but not all major points of access
- Pedestrian crossing distances are normal lengths and have not been reduced by providing expanded corners and/or safety islands
- Storm drains are not located outside marked crossings.
- Crossings are not marked permanently with special materials or a change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)













Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing **Impediments**
- -Curbing/Ramps
- -Integrity

- No Street- signals for pedestrians
- No street light for pedestrians
- Street-markings for pedestrians are present; white painted lines indicate crossing zones
- No Bump Outs or pedestrian islands utilized
- Curb Cuts are present at crosswalks but not all major points of access
- Pedestrian crossing distances are normal lengths and have not been reduced by providing expanded corners and/or safety islands
- Storm drains are not located outside marked crossings
- Crossings are not marked permanently with special materials or a change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)







Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing Impediments
- -Curbing/Ramps
- -Integrity

Block D:

- No pedestrian crossing signage
- No Street- signals for pedestrians
- No street light for pedestrians
- Street-markings for pedestrians are present; white painted lines indicate crossing zones
- No Bump Outs or pedestrian islands utilized
- Curb Cuts are present at crosswalks but not all major points of access
- Pedestrian crossing distances are normal lengths and have not been reduced by providing expanded corners and/or safety islands
- Storm drains are not located outside marked crossings.
- Crossings are not marked permanently with special materials or a change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)



















Streetscape Element to Evaluate Street Signage Examining: -Way-Finding Signs -Street Name Signs -Informational Signs -Design Features

Streetscape Element Features Evaluation

Block A:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages







Streetscape Element Features Evaluation

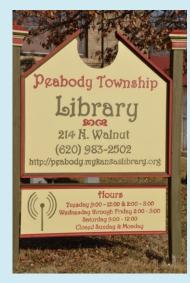
Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block B:

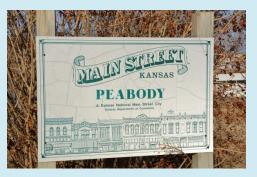
- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are present
- Library signage is large wellproportioned characters, good contrast, easy to read fonts.
- Signs are in prominent locations and worded effectively.
- No Pictograms and or alternative languages











Streetscape Element Features Evaluation

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for businesses are prominent and well positioned
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- No Pictograms and or alternative languages included.









Streetscape Element Features Evaluation

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block D:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.







Russell, Kansas Streetscape Audit

Russell, Kansas Streetscape Audit

Streetscape Element Features Evaluation Streetscape Element to Evaluate Block A: Walkways & Sidewalks Textures • No tree lifts Slight erosion of concrete pavement **Examining:** Walkway is even and smooth Tread Walkway is free of debris and trip **Path Integrity** hazards **Design Features** • Walkway is wide for heavy pedestrian circulation • Walkways surface featured very few holes Integrity of the walkway is in good shape







Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Block B:

- No tree lifts
- idewalks Textul

Examining:

Path Integrity

Design Features

Tread

- Slight erosion of concrete pavement
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Walkways surface featured very few holes
- Integrity of the walkway is in good shape
- Pavement cutout due to removal of a temporary structure never repaired.









Streetscape Element Features Evaluation

Walkways & Sidewalks Textures

Examining:

Path Integrity

Design Features

Tread

- No tree lifts
- Slight erosion of concrete pavement
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Walkways surface featured very few holes
- Integrity of the walkway is in good shape









Streetscape Element Features Evaluation

Walkways &

Sidewalks Textures

Examining: Tread **Path Integrity Design Features**

Block D:

- No tree lifts
- Slight erosion of concrete pavement
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Walkways surface featured very few holes
- One large hole on side street due to removal of some preexisting structure
- Integrity of the walkway is in good shape











Streetscape Element Features Evaluation

Walkways &

Sidewalks Textures

Examining: Tread Path Integrity Design Features

Block E:

- No tree lifts
- Slight erosion of concrete pavement, especially near and around pedestrian crossing curb ramps
- Sidewalk cellar access pit door sealed with tar creates an uneven walkway texture and potential trip hazard
- Driveway entrances on block are heavily cracked from heavy traffic wear
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Walkways surface featured very few holes, however there is one really big hole due to erosion













Streetscape Element Features Evaluation

Walkways & **Sidewalks Textures**

Examining:

Path Integrity

Design Features

Tread

Block F:

- No tree lifts
- Walkway textures are for the most part even and smooth
- Very few instances of uneven joints along walkway and cracks, holes and fractures are minimal
- Greater part of walkway damage and erosion of concrete pavement located at pedestrian crossings, curb cuts, and curb ramps
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Walking surface is stable firm and non-slip concrete











Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block A:

- Some uneven joints in concrete pavement. They are indicated with paint to warn pedestrians
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation









Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block B:

- Walkway obstacles and obstructions are blocked off from pedestrians to prevent accidents and create a clear boundary
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation











Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

- Some uneven joints in concrete pavement that are not marked
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation











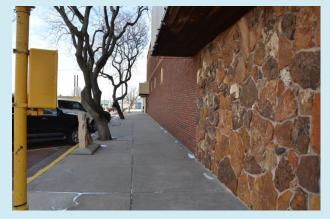
Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block D:

- Some uneven joints in concrete pavement that are not marked
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation









Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block E:

- Some uneven joints in concrete pavement that are not marked
- Walkway is even and smooth
- Walkway is free of debris and trip hazards
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation









Streetscape Element Features Evaluation

Walkways & Sidewalk Obstructions

Examining: Curb Cuts & Boundaries Impediments Design Features

Block F:

- Some uneven joints in concrete pavement that are not marked
- Walkway is even and smooth
- Walkway is free of debris and trip hazards are marked with contrasting paint
- Walkway is wide for heavy pedestrian circulation
- Amenities are off to the side out of the way of pedestrian circulation











Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block A:

- All building entrances have a no-step threshold entrance.
- Alternatives to stairs are present near the main entry point
- This block features stores that all have entrances with a nostep threshold for easy access for disabled or elderly
- Stairs and ramps do not feature slip resistant traveling surfaces
- Tactile indicators are not used on the railing











Streetscape Element Features Evaluation

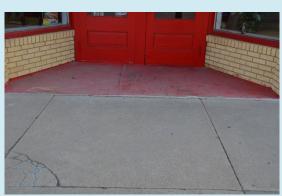
Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block B:

- Most building entrances have a no-step threshold entrance or slight slop. Entrances that do not have a stair alternative in the front have one in the back alleyway on this block.
- Stairs and ramps do not feature slip resistant traveling surfaces









Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

- Most building entrances have a no-step threshold entrance and those that don't either have a one or two-step threshold or an accessible alternative in the back
- Alternatives to stairs are present near the main entry point for staircase located on side street of 7th street
- Stairs and ramps do not feature slip resistant traveling surfaces
- Tactile indicators on railing such as groves or bumps are not present

















Streetscape Element Features Evaluation

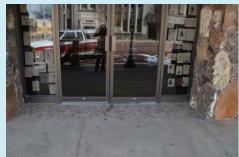
Vertical Circulation: Walkway Stairs & Inclines

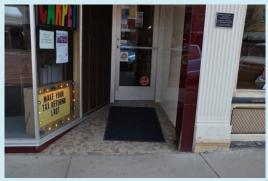
Examining: -Mobility -Incline Indicators -Safety

Block D:

- Most building entrances have a no-step threshold entrance
- There are a few entrances, which have a step up threshold not conducive to accessibility and usability for elderly; however, some of these entrances have accessible alternatives in the back alleyway
- Stairs and ramps do not feature slip resistant traveling surfaces
- Entrances with inclines and stairs did not feature railings for stability support













Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block E:

- Most building entrances have a no-step threshold entrance; one entrance is a one-step threshold with an accessible alternative in the back.
- One building has steps to an apartment and railing is available but lacks tactile indicators such as bumps and groves. An alternatives to stairs are present near the main entry point on the side of the building
- Stairs and ramps are concrete and do not feature slip resistant traveling surfaces
- One entryway features a ramp with a ceramic surface which can become slick in wet weather













Streetscape Element Features Evaluation

Vertical Circulation: Walkway Stairs & Inclines

Examining: -Mobility -Incline Indicators -Safety

Block F:

- Most building entrances have a no-step threshold entrance
- There are a few entrances, which have a step up threshold.
- Alternative entrances with a nostep threshold entry are present near the main entry point







Streetscape Element Features Evaluation

Streetscape Lighting: Artificial Illumination

Examining: -Streetlight Distribution -Landmark/Feature

Lighting -Pedestrian Crossing

Lighting

Block A:

- Streetlights adequately distribute lighting throughout the streetscape. (There are two street box lights per block and four or so historical streetlamps for each block in Russell)
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights provide additional illumination at intersections at each block.
- Artificial illumination is not provided for way finding signs.
- Crosswalks have light signals for stopping traffic flow for safe walking times.
- No higher illumination for key features (for example signs, stair treads)









Streetscape Element Features Evaluation

Streetscape Lighting: Artificial

Illumination

Examining: -Streetlight Distribution -Landmark/Feature Lighting -Pedestrian Crossing Lighting

Block B:

- Streetlights adequately distribute lighting throughout the streetscape.
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights are distributed evenly to provide additional illumination at intersections at each block.
- Crosswalks have light signals for stopping traffic flow for safe walking times
- No higher illumination for key features (for example signs, stair treads) but is provided for memorial park







Streetscape Element Features Evaluation

Streetscape Lighting: Artificial

Illumination

Examining: -Streetlight Distribution -Landmark/Feature

Lighting -Pedestrian Crossing Lighting

Block C:

- Streetlights adequately distribute lighting throughout the streetscape (four historical streetlamps and two streetlights)
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights are distributed evenly to provide additional illumination at intersections at each block.
- Artificial illumination is not provided for way finding signs.
- Crosswalks have light signals for stopping traffic flow for safe walking times
- No higher illumination for key features (for example signs, stair treads)





Streetscape Element Features Evaluation

Streetscape Lighting:

Artificial Illumination

Examining: -Streetlight Distribution -Landmark/Feature Lighting -Pedestrian Crossing

Lighting

Block D:

- Streetlights adequately distribute lighting throughout the streetscape (four historical streetlamps and two streetlights)
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights are distributed evenly to provide additional illumination at intersections at each block.
- Artificial illumination is not provided for way finding signs.
- Crosswalks have light signals for indicating safe walking times.
- No higher illumination for key features (for example signs, stair treads)





Streetscape Element Features Evaluation

Streetscape Lighting: Artificial Illumination

Examining:
-Streetlight
Distribution
-Landmark/Feature
Lighting
-Pedestrian Crossing

Lighting

Block E:

- Streetlights adequately distribute lighting throughout the streetscape (four historical streetlamps and two streetlights)
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights are distributed evenly to provide additional illumination at intersections at each block.
- Artificial illumination is not provided for way finding signs.
- Crosswalks have light signals for indicating safe walking times.
- No higher illumination for key features (for example signs, stair treads)





Streetscape Element Features Evaluation

Streetscape Lighting: Artificial

Illumination

Examining:

- -Streetlight Distribution
- -Landmark/Feature
- Lighting
- -Pedestrian Crossing Lighting

Block F:

- Streetlights adequately distribute lighting throughout the streetscape (four historical streetlamps and two streetlights)
- Additional lighting from historical lamp posts provide extra illumination
- Streetlights provide additional illumination at intersections at each block.
- Artificial illumination is provided at the Dream Theater, which features lighting at box office and LED marquee sign for announcements and advertising
- Crosswalks have light signals for stopping traffic flow for safe walking times



Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Examining:

- -Landscaping
- -Amenities
- -Furniture
- Placement

Block A:

- Each amenity available on this block is distributed evenly to ensure pedestrians are not too far from walkway seating, radio broadcast from the P.A. system or natural amenities like trees and flower planters.
- All blocks feature a P.A. system attached to each box streetlight, which broadcasts local weather, advertisements, and news
- Benches on each block, which provide seating areas for resting, are provided at intervals out of the circulation path.
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel.











Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Examining:

- -Landscaping
- -Amenities
- -Furniture
- Placement

Block B:

- Placement of the Garbage cans, benches for seating, and planters for aesthetics are present and in abundance.
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel
- Block B features a park, which used to be a parking lot. This park features a shelter with tables and seating a gravel walkway and natural landscaping
- Park space provides additional resting area; however its sandy walking surface limits accessibility











Streetscape Element Features Evaluation

Streetscape **Furniture & Amenities**

Examining:

- -Landscaping
- -Amenities
- -Furniture **Placement**

Block C:

- Each amenity available on this block is distributed evenly to ensure pedestrians are not too far from walkway seating, radio broadcast from the P.A. system or natural amenities like trees and flower planters.
- Placement of the Garbage cans, benches for seating, and planters for aesthetics are present and in abundance.
- Seating Areas for resting are provided at intervals and placed outside the circulation path to avoid creating obstructions.
- Amenities have wheelchair clearance space for access
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel.













Streetscape Element Features Evaluation

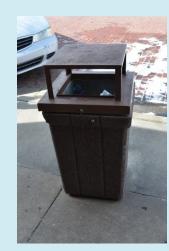
Streetscape Furniture & Amenities

Examining:

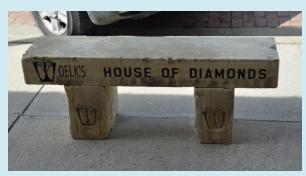
- -Landscaping
- -Amenities
- -Furniture
- Placement

Block D:

- Evenly distributed availability and placement of the Garbage cans, benches for seating, and planters for aesthetics
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel









Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Examining:

- -Landscaping
- -Amenities
- -Furniture Placement

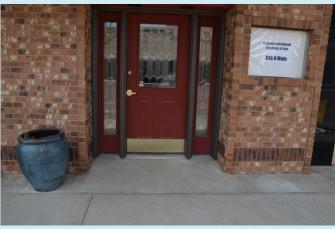
Block E:

- Evenly distributed availability and placement of the Garbage cans, benches for seating, and planters for aesthetics
- Many of the planters on this block are owned by local businesses and not city bought and maintained
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel









Streetscape Element Features Evaluation

Streetscape Furniture & Amenities

Examining:

- -Landscaping
- -Amenities
- -Furniture Placement

Block F:

- Evenly distributed availability and placement of the Garbage cans, benches for seating, and planters for aesthetics
- This block features a soda machine and an ice box provided by the local grocery store
- Seating Areas for resting are provided at intervals out of the circulation path.
- Amenities have wheelchair clearance space for access
- Trees are plentiful and evenly distributed along streetscape
- Amenities are located to the side of the direct path of travel









Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing **Impediments**
- -Curbing/Ramps
- -Integrity

Block A:

- Street- signals and street-markings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)









Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing Impediments
- -Curbing/Ramps
- -Integrity

Block B:

- Street- signals and street-markings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)







Streetscape Element Features Evaluation

Pedestrian Crossings

r cuestrium er ossi

Examining:

-Pedestrian Traffic Light

- -Crossing Impediments
- -Curbing/Ramps
- -Integrity

Block C:

- Street- signals and streetmarkings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)







Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

- -Pedestrian Traffic Light
- -Crossing **Impediments**
- -Curbing/Ramps
- -Integrity

Block D:

- Street- signals and street-markings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)





Streetscape Element Features Evaluation

Pedestrian Crossings

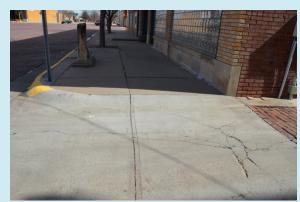
Examining: -Pedestrian Traffic

Light

- -Crossing
 Impediments
- -Curbing/Ramps
- -Integrity

Block E:

- Street- signals and streetmarkings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- This block features curb ramps at the alleyway for easy access for elderly and disabled, even away from the main street
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)





Streetscape Element Features Evaluation

Pedestrian Crossings

Examining:

-Pedestrian Traffic Light

- -Crossing Impediments
- -Curbing/Ramps
- -Integrity

Block F:

- Street- signals and streetmarkings for pedestrians are present.
- No Bump Outs or pedestrian islands utilized.
- Curb Cuts are present at crosswalks and major points of access and curb ramps present at major crossings and access points.
- Pedestrian crossing distances on crossing routes are standard length. Crossings are not reduced with expanded corners and/or safety islands.
- Storm drains are located outside marked crossings.
- Crossings are clearly marked with painted yellow and white lines. Crossing boundaries are permanently marked with change of paving material (e.g. brick in contrast to concrete or asphalt roadways.)











Streetscape Element Features Evaluation

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block A:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.
- Signs for businesses are prominent and well positioned





Streetscape Element
to Evaluate
Street Signage
Examining: -Way-Finding Signs -Street Name Signs -Informational Signs -Design Features

Streetscape Element Features Evaluation

Block B:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not wellproportioned or well-contrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.
- Signs for businesses are prominent and well positioned



Streetscape Element Features Evaluation

Street Signage

on eet olghage

Examining:

- -Way-Finding Signs -Street Name Signs
- -Informational Signs
- -Design Features

Block C:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.
- Signs for businesses are prominent and well positioned





Streetscape Element Features Evaluation

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block D:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.
- Signs for businesses are prominent and well positioned









Streetscape Element Features Evaluation

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block E:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.













Streetscape Element Features Evaluation

Street Signage

Street Signage

Examining:

- -Way-Finding Signs
- -Street Name Signs
- -Informational Signs
- -Design Features

Block F:

- Stop signs are present at major intersections
- No Pedestrian Crossing signs are present at major intersections and crossings.
- Signs for Street names are small and hard to read
- Informative and way finding signs are not present
- Signs for information are not present.
- Signage is small print and not well-proportioned or wellcontrasted for easy reading
- Signs are in prominent locations
- No Pictograms and or alternative languages included.
- Signs for businesses are prominent and well positioned







Interviews

I met with representatives from each of my communities and discussed what initiatives and undertakings that have been attempted in the past, or considered for the future to further the accessibility of elderly populations within their community.

The interviews were taken to provide concrete examples of innovative solutions that their Main Street organization has taken on to address the issue of accessibility for aging rural communities. The interviews also helped determine the focus of Russell and Peabody's Main Street organization, its programs, and its current circumstances. The interview with Russell was a casual face-to-face interaction and Peabody a casual exchange through email.

Peabody Interviews

When asked about universal design, accessibility, and usability of the downtown streetscape Peabody's Main Street organization representative stated that desires to have an accessible streetscape; however, their main limitation is the lack of funding. This is the greatest barrier for Peabody's Main Street organization. There is a solid relationship between the municipal governing body and other committees within the community; however, no major movement has been made to address streetscape concerns. A lot of the work done in the past has been on historical preservation of the downtown buildings, but no significant undertaking has been implemented to address the streetscape conditions. Of the four Main Street approaches, economic development and promotions have garnered the most attention. The primary setback for Peabody's main street accessibility is poor maintenance of basic infrastructure. There are large cracks in walkways and in some areas; there is no paved walkway for pedestrians.

The Peabody Main Street representatives desire to see a more concerted focus on streetscape enhancements, however because of the financial costs and other issues, streetscapes will not be a Main Street focus anytime soon.

Russell Interviews

The Russell streetscape project in the 1990s was extensive and comprehensive. The streetscape team was composed of city government body and staff, the economic development director, private citizens and Main Street committee and designing committee.

Their objectives were to put Main Street redevelop the downtown to be inviting for business and shopping. This plan required funding and some of sources of funding investments were from private funds, some from public funds and the rest from Community Development Block Grants (CDBG). Sources of private funding investments came from individual businesses, downtown businesses incentives programs (provided by local bankers) and the Incentives without walls (IWW) funding program. The I.W.W. is a finance tool that was available to designated Kansas Main Street programs and used to stimulate private investment. This program would match private investments for redevelopment projects.

One of the projects that were undertaken during the downtown redevelopment project was installing historical lampposts. The lampposts were a big part of the streetscape program. Russell wanted to create a "true" downtown and they felt the lampposts added a historical downtown connection to the project. In order to fund the lampposts, private donations were taken to purchase the lampposts. Those who donated would get a bronze plaque to commemorate the donator.

Public funding paid for the heavy infrastructure engineering and labor of larger infrastructure enhancements to the downtown. The CDBG funds paid for the infrastructure itself. Street lighting in addition to the historical lampposts were installed with energy efficient high-pressure sodium bulbs. These were installed to save on energy costs, while at the same time producing more lighting downtown for pedestrians and vehicles in the evening. Public financing from the city, helped plant trees, which line the walkways and create evenly spaced shade and enhances the aesthetical appeal. Irrigation and electrical conduits were installed to each tree for proper watering and easy access to power for Christmas lighting during the holidays. New sidewalks were also installed to create a safer smother walking surface for visitors and residence. Sidewalks are smooth concrete with ramp curb cuts for easy pedestrian access. New water mains and meters were also installed with public funds from the city, which helped to save on

water waste and preempt any water line issues in the near future due to old age and deterioration.

Final Analysis

Analysis of Findings

Through my analysis, I found a mixture of accessibility scenarios, rather than just one, for my sites of study. Both communities understood the need to upgrade their downtown streetscape; however, the primary goal that motivated streetscape programs was never to increase the accessibility and ease of travel for elderly. For both communities, streetscape improvements were about enhancing and maintaining a specific aesthetic appeal, primarily for attracting families to stay, tourists for shopping, and businesses for economic growth. For both Russell and Peabody, their Main Street organization pursued streetscape projects because they expected aesthetic projects would enhance business and community lifestyle. The accessibility and usability of these streetscapes were a small part of the consideration of these streetscape undertakings, but was not the primary focus.

Neither community's downtown streetscapes are adequately designed to the universal design's streetscape elements criteria, however, there are some universal features present in both communities streetscape elements. I originally believed that both Peabody and Russell's Main Street organizations would feature a downtown streetscape lacking in even some basic accessibility and usability features. Though this was the case concerning some streetscape elements, I found that both Russell and Peabody's Main Street organization did have some streetscape elements that fulfilled the universal design criteria for accessible and usable streets. For the most part both communities possessed basic access compliances, but only a few streetscape elements contained two or more usability and accessibility features.

Most of the streetscapes in both locations came short of the universal design criteria for accessible streetscapes. I found through my analysis that both Russell and Peabody's Main Street organization did have some streetscape elements that fulfilled the universal design criteria for accessible and usable streets. This does not mean that the streetscapes as a whole are adequately designed to universal design standards, but that specific features in the streetscape elements make for safe and easy to navigate streetscape for elderly populations.

The audit and interviews were all done to determine which one of the four-streetscape accessibility scenarios were exhibited at my sites, Russell, Kansas and Peabody, Kansas. The following are streetscape accessibility scenarios that were expected:

- 1. Either the town has accessible streets and accessible street design is not a priority;
- 2. The town has accessible streets and accessible street design is a priority;
- 3. The town does not have accessible streets and accessible street design is not a priority;
- 4. Alternatively, the town does not have accessible streets and accessible street design is a priority.

Russell currently fits scenario one in that it has accessible streets but accessible street design is currently not the main priority. However, due to the reality of their aging demographic trends there is a renewed focus and support for more accessible streetscapes in the future by the Main Street organization.

The results of the analysis showed that Russell, Kansas was a community that did have accessible streets. Basic accessibility criteria were consistently met block by block and multiple universal streetscape features were present in streetscape elements evaluated. Even though Russell has accessible streetscapes, the interviews conducted with Main Street organization representatives indicated that there is a growing concern for better accessibility. Russell Main Street's last big streetscape project was undertaken nearly twenty years ago. Russell's Main Street organization's downtown streetscape redevelopment project was completed in the 1990's, and at completion, the organization's concentration and support shifted to other main street approaches such as promotions, and economic development.

Flash forward to the present and the demographics of Russell are older in age than in the past. The median age of Russell residents is above the state average and they are now witnessing an aging community. Russell has done well in maintaining their streetscape features such as mending cracks and holes in walkways and repainting crossing zone lanes, but they grasp that more than basic access criteria needs to be met. Russell Main Street

representatives were well aware of the perceived vulnerabilities and difficulties that elderly residence may face in their streetscapes as they age.

Peabody fits scenario three in that it does have accessible streetscape elements; however, they are in poor condition. Basic accessible streetscape criterion for streetscape elements was hardly met in Peabody. An example would be the lack of a walkway on 1st street of Block "C" and inadequate street lighting for most side streets of all study blocks. The primary setback for Peabody's main street accessibility is poor maintenance of basic infrastructure. Large cracks in walkway, vegetation overgrowth, and uneven pavement joints on walkway surfaces are issues due, in large part, to financial limitations. The Peabody Main Street representatives desire to see a more concerted focus on streetscape enhancements, however because of the financial costs and other issues, streetscapes will not be a Main Street focus anytime soon. The main street approaches of economic development and promotions are what Peabody Main Street's current focus is geared toward.

Both Main Street organizations saw aging demographics as a significant concern for their community; however, the organizations approaches varied greatly because of their distinctive limitations. For Peabody the major limitation was finding funding. There were multiple public engagement meetings and proposals; however, the access to proper funding sources, which could fund large streetscape projects, was always out of Peabody's reach. Peabody resorted to small incremental purchases of streetscape furniture and streetscape maintenance and repair. Russell's financial obstacles were overtaken by substantial public and private investments and donations to fund large streetscape undertakings.

Because there was such an ambitious streetscape undertaking in the past, Russell had averted attention away from streetscapes and design and onto economic development and promotions of the downtown space. Now that the demographics are shifting to an older populous accessible streetscapes are becoming a concern. Promotions have also become important for retaining businesses that are essential to Russell due to the troubled economy. The Russell Main Street organizations challenge is deciding which main street approaches should take priority.

Conclusion

Using a streetscape analysis audit and interviews with Main Street organization members, this report evaluated two rural Kansas communities' downtown streetscapes. The intent of this report was to determine if the Main Street program had furthered the accessibility and usability of the streetscapes in rural Kansas municipalities. I expected to discover policies, strategies, and undertakings that matched the level of concern I found when interviewing community leaders. I have found that rural communities truly see the value and concern in providing accessible streetscapes for their elderly populations. However, the finding of this study showed there was a significant range of streetscape adequacy from site to site and was not necessarily reflective of their concern level.

Representing rural communities with autonomous Main Street organizations, Russell and Peabody, Kansas, exhibited a range of streetscape and walkway accessibility success. The issue of aging demographics is a real concern for both Russell and Peabody. Peabody and Russell have acknowledged the foreseeable challenges that their aging populations may face while navigating their communities' streetscapes. Streetscapes with inadequate walkway accessibility and deficient amenities limit the full use and mobility that aging residents have. There are different problems each community has to work through and the mindset of the community plays a big role in what problems are attend too. What I also learned is that the single common factor that limited the two Main Street organizations was the capital financing of projects. The lack or absence of funding can slow the forward momentum of a community.

I discovered that it is true that both communities are aware of the issue, however, the purpose of their undertakings, however extensive they were, were more for aesthetics than for accessibility and function. The downtowns of both Russell and Peabody are well preserved and cared-for. That being said, streetscape undertakings, in Russell, Kansas did and exemplary job at addressing many of the streetscape access issues for the elderly that can be found in rural communities. Concerns, such as, poor pedestrian crossing-zones, were addressed with curb ramps and painted crossing lanes at Russell's downtown intersections. The immense efforts put

out by Russell in the early 90s have created a much smaller mountain for the community to climb in the future.

For many years, the Main Street program has been a valuable tool for city leaders and planners in many communities throughout the United States. City leaders and Main Street organizations have worked together to transform many rural communities. As stated before, streetscape access and mobility are important elements of streetscape design and should be safe places for people of all ages and abilities.

Appendix

Works Cited

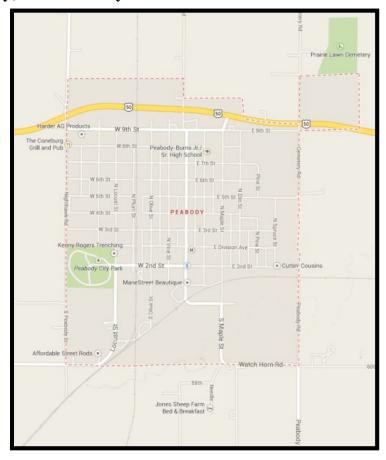
- Centre for Excellence in Universal Design. (2013, 11 12). Building for Everyone: A Universal Design Approach. *Planning & Policy*. Dublin, Ireland. doi:http://universaldesign.ie./files/bfe/BfE-9-planning.pdf
- Centre for Excellence in Universal Design. (2013, 10 12). *explore and discover*. Retrieved 11 12, 2013, from Centre for Excellence in Universal Design: http://www.universaldesign.ie/exploreampdiscover
- Daniels, T. L., Keller, J. W., Lapping, M. B., Daniels, K., & Segedy, J. (2007). *The Small Town Planning Handbook 3rd ed.* (3rd Edition ed.). (J. Shwed, Ed.) Chicago, Illinois, United States: Planners Press, American Planning Association.
- Facca, A. (2013, 10 28). Downtown and Main Streets: How Facade Improvement Programs Can Benefit Your Community. (I. PlannersWeb.com / Champlain Planning Press, Inc.) Retrieved 01 15, 2014, from PlannersWeb:

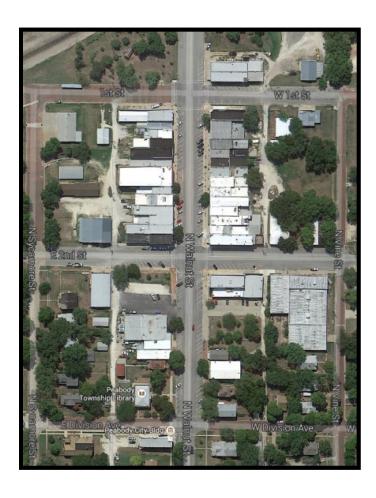
 News and Information for Citizen Planners: http://plannersweb.com/2013/10/how-facade-improvement-programs/
- Ghazaleh, R. A., Greenhouse, E., Homsy, G., & Warner, M. (2011). Multigenerational Planning: Using smart growth and universal design to link the needs of children and the aging population. (A. P. Association, Ed.) Chicago, Illinois, United States: American Planning Association.

 Retrieved 01 23, 2013, from http://www.planning.org/research/family/briefingpapers/multigenerational.htm
- Levine, D., & Steinfeld, E. (2003). Universal Design New York 2: The NYC Guidebook to Accessibility and Universal Design. *Universal Design New York*. (D. Levine, Ed.) Buffalo, New York: IDeA Publications. Retrieved 11 30, 2013, from Offical Website of the City of New York: http://www.nyc.gov/html/ddc/downloads/pdf/udny/udny2.pdf

- Rothschild, S. (2012, 09 20). *Brownback administration shutting down Kansas Main Street program*. Retrieved 01 05, 2014, from Lawrence journal-World.com: http://www2.ljworld.com/news/2012/sep/20/brownback-administration-shutting-down-kansas-main/
- Rowley, T. D. (1996). Rural development research: A foundation for policy. Westport: Greenwood Press.
- Russell Main Streets Organization. (2014, 01 05). *Russell Main Street Home page*. Retrieved 01 05, 2014, from russellmainstreet.com: http://russellmainstreet.com/
- Smith, K. L. (2005, 06 30). *Downtown and Main Streets: Downtown Hurdles*. (I. PlannersWeb.com / Champlain Planning Press, Producer, & PlannersWeb.com / Champlain Planning Press, Inc.) Retrieved 01 15, 2014, from PlannersWeb: News and Information for Citien Planners: http://plannersweb.com/2005/06/downtown-hurdles/
- The Associated Press. (2012, 09 24). *Cities across Kansas stunned by Main Street shutdown*. Retrieved 01 05, 2014, from Topeka Capitol Journal.com: http://cjonline.com/news/2012-09-24/cities-across-kansas-stunned-main-street-shutdown
- The National Trust for Historic Preservation. (2014, 01 05). What Happened to America's Main Streets? Retrieved 01 05, 2014, from preservationnation.org: http://www.preservationnation.org/main-street/about-main-street/getting-started/what-happened-to-main-street.html

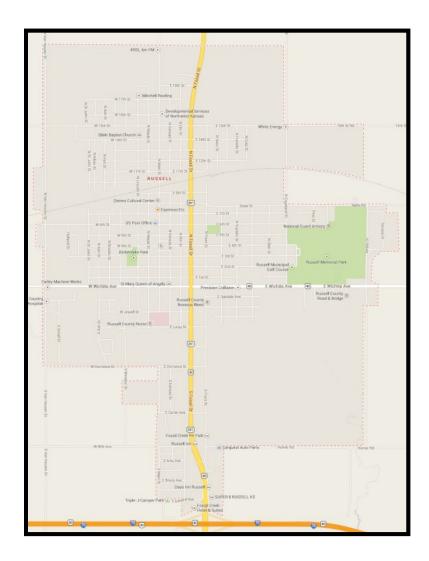
Peabody, Kansas: City Limits and CBD





Russell, Kansas: City Limits and CBD





Streetscape Elements

Sampled from the UDNY2 Guidebook)

Site Issues

Pathways

- o Each site facility and accessible entrance can be reached along an accessible path of travel
- o All facilities can be reached from a single continuous accessible path system without stairs (Rather than separate paths from different access points)
- Options for access to different facilities and entrances provide benefits for different user groups (a short path with stairs as well as a longer path without stairs)
- o Adequate illumination along all pathways and stairs that prevent accidents after dark

Vertical Circulation

- o All levels connected by accessible ramp, lift or elevator
- o Accessible vertical circulation is as safe, secure and convenient as stairs
- o Building entrance or facility has only one level or all ramps, lifts and elevators are integrated fully into the path that everyone follows (entry and exits for elevator is at the same relative locations as for stairs
- o All paths of travel including elevators are well lit and open to visual access (paths of travel are safe and secure)

Amenities (Drinking Fountains, Garbage receptacles, streetscape furniture)

- o Amenities are along accessible path, have wheelchair clearance space for access and operable parts are within accessible reach limits
- o Amenities are located to the side of the direct path of travel
- o Amenities are grouped together and conveniently located
- o Adjustable or alternative heights provided for amenities

Walking Surfaces

- Walking surfaces are all stable, firm, non-slip, and free of dangerous overhanging hazards and unprotected falling hazards
- o Edges of walking surfaces well defined
- o Walking surface texture aid in direction finding activities
- Walking surfaces are well drained

Building Access Points and Entry

- Accessible circulation to doorways, sufficient door width and maneuvering clearances, opening force below limits
- o All entries are accessible (rather than separate paths from different access points)
- o Principle entries have automated doors and on grade access (If there is a ramp, it is used by all visitors)
- Only one accessible pedestrian access point to the site
- o More than one pedestrian access point is accessible (to serve different directions of access)
- o All primary access points are accessible.

Environmental Systems

Artificial Illumination

- o Adequate illumination is provided, which supports task performance, safety and security
- o Key features emphasized by higher illumination levels (for example landmarks, signs, stair treads)

Information and Direction Signs

- o Signs for information and directions have large well-proportioned characters, good contrast, easy to read fonts
- o Signs in prominent locations, well illuminated an worded effectively
- o Pictograms and or alternative languages included

Program Spaces

Public Assembly

- o Accessible seating area and stages, assistive listening systems (ALS), line of sight to activities
- o Circulation designed to accommodate large volumes of traffic
- o Amenities and restrooms in predictable and obvious locations

Outdoor Recreation

- o Seating for onlookers at all long term attractions (for example, playgrounds, tennis courts and playing fields)
- Protection from excessive sun and sudden rain

Universal Design Seven Principles (Reformatted table from the Center for Excellence in Universal Design)

Principle 1: Equitable Use	Principle 2: Flexibility in Use	Principle 3: Simple and Intuitive Use	Principle 4: Perceptible Information	Principle 5: Tolerance for Error	Principle 6: Low Physical Effort	Principle 7: Size and Space for Approach and Use
The design is useful and marketable to people with diverse abilities.	The design accommodates a wide range of individual preferences and abilities.	Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.	The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.	The design minimizes hazards and the adverse consequences of accidental or unintended actions.	The design can be used efficiently and comfortably and with a minimum of fatigue.	Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.
Guidelines: 1a. Provide the same means of use for all users: identical whenever possible; equivalent when not. 1b. Avoid segregating or stigmatizing any users. 1c. Provisions for privacy, security, and safety should be equally available to all users. 1d. Make the design appealing to all users.	Guidelines: 2a. Provide choice in methods of use. 2b. Accommodate right- or left-handed access and use. 2c. Facilitate the user's accuracy and precision. 2d. Provide adaptability to the user's pace.	Guidelines: 3a. Eliminate unnecessary complexity. 3b. Be consistent with user expectations and intuition. 3c. Accommodate a wide range of literacy and language skills. 3d. Arrange information consistent with its importance. 3e. Provide effective prompting and feedback during and after task completion.	Guidelines: 4a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information. 4b. Provide adequate contrast between essential information and its surroundings. 4c. Maximize "legibility" of essential information. 4d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions). 4e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.	Guidelines: 5a. Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded. 5b. Provide warnings of hazards and errors. 5c. Provide fail safe features. 5d. Discourage unconscious action in tasks that require vigilance.	Guidelines: 6a. Allow user to maintain a neutral body position. 6b. Use reasonable operating forces. 6c. Minimize repetitive actions. 6d. Minimize sustained physical effort.	Guidelines: 7a. Provide a clear line of sight to important elements for any seated or standing user. 7b. Make reach to all components comfortable for any seated or standing user. 7c. Accommodate variations in hand and grip size. 7d. Provide adequate space for the use of assistive devices or personal assistance.

Initial Interview Email Template

Dear Ms, Mrs., Mr. Dr., Miss:

I am a graduate student enrolled in the Landscape Architecture and Regional Community Planning Department at Kansas State University. I am in the process of completing my master's report, which studies the growing issue of aging demographics in rural Kanas communities.

My data collection is in two parts, site analysis, and interviews. I am contacting you to see if you would be kind enough to consider volunteering a small portion of your time and allow a few interview questions pertaining to your communities Main Street program. I have no more than 15 interview questions and I will take no more than 30 minutes of your time.

The general suggestion is that, as adults grow older; their need for accessible and usable environments increases. My research identifies the importance of incorporating accessible and usable elements into municipal streetscapes. Design, one of the four elements of the Main Street approach, focuses on improving the visual aesthetic and value of the main street, which includes accessible streetscapes. Through site analysis and interviews, I will evaluate if streetscape accessibility is a priority for aging, rural Kansas communities and identify what steps have been taken to establish accessible streets for elderly.

I appreciate your consideration of my request. Realizing the demands on your time, I will telephone you next week to see if we can arrange a brief

meeting at your convenience.

I will call you on ______ to see if you are available during the week of ______ or you may leave a message for me using my information below. Any and all questions are more than welcome.

Thank you so much for your time and I am looking forward to meeting with you. Sincerely,

James E. Rivers Kansas State University| Regional Community Planning 785.341.1262 james9@ksu.edu

Interview Sample Questions

Sample Questions

How long has your community been a part of Kansas' Main Street program?

What initiatives do cities currently have that address universal access and usability?

What initiatives are your city/Community's Main Street organization pursuing that promotes improvement of streetscape? Are there any accessibility or usability elements to those streetscape initiatives?

What activities, initiatives, and promotions do your communities Main Street organizations participate?

What are some long term/short term goals that your Main Street organization has achieved since its inception? What future goals does the organization have?

Is usability and accessibility of streetscapes for elderly an important objective for your town/Main Street program?

What is the relationship between this community's Main Street organization and other governmental departments? Are there shared goals or objectives?

Does your city/Community's Main Street organization feel it is important that every individual have a right to live and active and healthy life? What are some current and planned projects/initiatives that best exemplify this belief in your community/organization?

Due to the reduction of funding, many Main Street organizations are struggling. How is your community's Main Street organization handling the fiscal crisis?

What are some of the Main Street organization projects you individually are most proud?

Does the downtown streetscape of your community support every stage of life? If so how? Are there any elements you wish you could enhance? What features or initiatives would you like to see implemented?

What is the greatest barrier to your communities Main Street organizations initiatives?

On a scale of 1-5 (5= main priority; 1= not at all a priority), where does integration of seniors into community life fit within your organizations priorities? Are there any land use restrictions, municipal codes, or design guidelines for new or rehabilitated properties that address the accessibility and usability of downtown streetscapes?

Have you heard about universal design before? Are you aware of its 7 principles?

Is your city/Community's Main Street organization concerned about the aging population issues in rural America?

Streetscape Element Audit Checklist (Reformatting of UDNY2 guidebook Audit)

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Walkways/Sidewalks Textures	 Sidewalk Tread Indicators for individuals with limited vision. Material of Sidewalk/Walkway is smooth, stable and non-slip. Examine the Breaks in concrete, Tree Lifts, Cracks and holes. 	 Direct access from all access points to all facilities and building entrances. Walking surface texture aid in direction finding activities. Walking surfaces are well drained. Separate pedestrian, vehicular and bicycle/skating pathways with clearly marked boundaries. Avoid irregular textures, ridges rough or uneven traveling surfaces and those that have large or protruding joints.

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Walkway/Sidewalk Obstructions	 Curb Cuts and ramps are used at crosswalks and major points of access. No Impediments to pedestrians such as tree roots, branches, streetscape furniture, or amenities. Sidewalk width is appropriate for traffic flow & municipal standards. 	 Edges of pathways are defined with curbs, contrasting textures, or other means. Width of the path based on the expected volumes and direction. Avoid obstructions and hazards that intrude into the path of travel (drainage grates, signs, overhanging trees, manholes, light fixtures, or benches).

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Streetscape Lighting: Artificial Illumination	 Light Posts adequately distributes lighting to streetscape. Artificial illumination at intersections and crossings. Artificial illumination for landmarks and way finding signs. 	 Lighting along pathways reflected downward onto the path without creating hot spots or glare. Adequate illumination is provided, & higher lighting levels in crossing areas to support task performance, safety & security Key features emphasized by higher illumination levels (for example landmarks, signs, stair treads)

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Walkway Level Differences: Vertical Circulation	 Alternatives to stairs such as ramps, lifts, or elevators are present for accessing different levels. Alternatives to stairs are relatively close to common entryway or access point. Handrails are present at steep inclines. 	 Potentially hazardous stairs, ramps and transitions marked with contrasting colors, textures, or materials to alert users. Ramps and stairways should be wide enough to accommodate the expected traffic flow, which may exceed minimum required width. There should be handrails, treads, and walking surfaces evenly illuminated w/out strong shadows. Slip resistant traveling surfaces without impeding the mobility of wheelchairs, strollers and other wheeled devices. Tactile indicators on railings like groves or bumps marking the beginning and end of a stairway or direction change.

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Streetscape Furniture & Amenities	 Benches or other seating features are present throughout the site. The availability and placement of the Garbage cans or recycle bins The availability and placement of streetscape features that provide protection from excessive sun and sudden rain. 	 Seating Areas for resting provided at intervals out of the circulation path. There should be seating at landings of long ramps and stairways. Amenities are along accessible path, have wheelchair clearance space for access and operable parts are within accessible reach limits Amenities are located to the side of the direct path of travel. Amenities are grouped together and conveniently located. Adjustable or alternative heights provided for amenities.

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Pedestrian crossings	 Street- signals and street-markings for pedestrians are present. Bump Outs or pedestrian islands utilized. Curb Cuts are present at crosswalks and major points of access. Curb ramps present at major crossings and access points. 	 Pedestrian crossing distances on major crossing routes should be reduced by providing expanded corners and/or safety islands. Storm drains should be located outside marked crossings. There should be clearly mark boundaries of crossings using permanent materials like thermoplastic strips or a change of paving material (e.g. brick in contrast to concrete or asphalt roadways.) Sonic beacons or talking sign® technology installed to guide people with visual impairments across the street.

Streetscape Element to Evaluate	Streetscape Element Features to Evaluate	Universal Criteria (Level of Usability)
Street signs	 Stop, Yield, Pedestrian Crossing signs are present at major intersections and crossings. Signs for Street names. Informative and way finding signs are present and helpful. 	 Signs for information and directions have large well-proportioned characters, good contrast, easy to read fonts. Signs in prominent locations, well illuminated and worded effectively. Pictograms and or alternative languages included.

(Centre for Excellence in Universal Design, 2013)