Daniel Boone Trace Trail Walkability Final Report For Bell County

Breanna Lawson, Azis Toktobaev, Anna Keller, Makayla Allison, Matthew Schwartz

Executive Summary

In May and June 2017, the members of the Entrepreneurship for the Public Good Program at Berea College in partnership with civic leadership of five Kentucky counties, the Madison County Health Department, the National Park Service, and Friends of the Boone Trace worked together to complete a set of ten Community Walkability Studies. On the recommendation of the Madison County Health Department, the Walkability Studies collected data using a Walkable Community Survey developed by the Pedestrian and Bicycle Information Center, a US Department of Transportation website run by the University of North Carolina.

The Walkable Community Survey assessed four main components associated with walking in the community from the perspective of the walker (see checklist in Appendix A and B). The components were: a) how easy the walk was, b) the variety of places participants saw or could get to during the walk, c) ease to cross the street; d) observed driver behavior; e) how enjoyable or pleasant the walk was, and f) how easy it was for adults and children to follow safety rules. This report is a compilation of that data for each of the five counties and the ten municipalities in the five counties crossed by the Daniel Boone Trace Trail.

The findings were shared with civic decision-makers such as mayors, judge executives in each county, Kentucky regional development districts and county health department staff members. The findings were also shared with civic groups that work towards making their municipalities more walkable. Each of the communities have a relationship with the multi-state, multi-county, and multi-use Daniel Boone Trace Trail. It is hoped that these civic decision-makers will use this local data to support budget and policy decisions that improve the built environment to better support residential walking and cycling on corridors and spurs aligned with the Daniel Boone Trace Trail.

Infrastructure changes that respondents commented on most often include: sidewalks -- ensuring sidewalks are in good repair on both sides of streets, streetscape -- improving the condition or type of shops and businesses that people can walk to, street furniture -- adding places for pedestrians to rest along walking routes, safety -- improving safety of walking routes by using traffic calming methods, and street lighting -- improving street lighting for visibility and safety of pedestrians.

By combining municipal data with other local data collection procedures such as traffic and walkability studies, municipal decision makers can add to their knowledge of residents' support for infrastructure changes and barriers that make it difficult for residents to walk to many local destinations. The intention of the Daniel Boone Trace Trail Walkability Final Report is to provide useful data that decision makers in the area cities can consider during prioritization of infrastructure projects. Promoting use of the Walkable Community Survey by residents will provide a growing base of data on existing supports for walkable communities along the Daniel Boone Trace Trail and data on areas in need of improvement.

The Walkable Community Survey may also promote awareness of the importance of walkable communities and build positive attitudes towards walkable communities.

Introduction

Rural and small town America is diverse and varied throughout the country. According to the Federal Highway Administration's Planning for Transportation in Rural Areas, 75 percent of America's 3,000 counties qualify as rural and cover 81 percent of the land area. Approximately 19 percent of the population live in rural areas (Administration NHTS, 2013).

Some commentators and decision-makers have long assumed that biking and walking are strictly a "big city" phenomenon, and that rural America can't benefit substantially from bicycling and pedestrian infrastructure (Knowles, et. al. 2011, Maher, 2009 and Myers 2009). Previous research has found that rural Americans walk and bicycle at 58 percent of the rate that urban Americans do (Pucher and Renne, 2005). However, the most recent data from the U.S. Department of Transportation (DOT) tell a different story. For some categories of rural communities, active transportation— human-powered mobility, including biking and walking—is as common as in urban areas. The share of work trips made by bicycle in small towns is nearly double that of urban centers. Further, biking and walking count as significant means of transportation all across the countryside. In coming years, active transportation can play an even bigger role in making small town America more attractive for young families and business investment— improving economic vitality, public safety and overall health in smaller communities in every U.S. region (Urban Land Institute, 2016).

The Urban Land Institute (ULI) has found that, "In recent years, investments in infrastructure that accommodates those who walk and ride bicycles have begun to reshape communities" (Zibers, 2016). The ULI cites it's America in 2015 report, stating that half of U.S. residents say walkability is important in deciding where they live, and the U.S. Census has determined that bicycling is the fastest growing form of transportation among commuters.

Growing evidence from across America documents the beneficial effects of walking and biking. People who live in communities where it is safe and convenient to engage in active transportation enjoy better overall health (Rodriguez, 2009; Pucher, et al., 2011), greater economic opportunities (Rails-to-Trails Conservancy (2008a), a cleaner environment (Rails-to-Trails, 2008b) lower energy bills (Cortright, 2008), and numerous personal and social gains associated with a strong sense of community (Rogers, et al. 2011). Unfortunately, most people think these advantages apply only to metropolitan areas. The belief is that low-density communities such as small cities, towns and rural areas will never sustain more than a few walkers and bike riders.

As part of efforts to establish walkable communities as the social and cultural norm, the Madison County Health Department recommended Daniel Boone Trace Trail Walkability Surveys be adopted by the Friends of the Boone Trace to fulfill the requirements of the National Park Service (NPS). The Walkability survey was designed from the Pedestrian and Bicycle Information Center, which is a US Department of Transportation site administered by University of North Carolina (UNC).

What is "walkability"? The quality is widely referred to, but poorly defined. A search on Google Scholar for journal articles with the "walkable neighborhood" yields over 18,000 entries, 54% of which were published since 2013. If we are to design more walkable cities, it will be necessary to define the term and make it operational through performance criteria. We offer the following definition: Walkability is the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety, connecting people with varied destinations within a

reasonable amount of time and effort, and offering visual interest in journeys throughout the network (Talen and Koschinsky, 2013).

A Walkability Checklist contains information designed to raise awareness about walkable communities and their associated health benefits. Most importantly, it provides a means for "trained walkers" to identify infrastructure strengths and challenges regarding the walkability of the local neighborhoods. The purpose of this investigation is to summarize the compiled data collected to date to identify existing supports for walkable communities as required by the NPS as well as to identify those areas in need of improvement. The data was taken from observational checklists returned by "trained walkers" within each of the ten cities between May and June 2017.

The report may be of interest to decision-makers such as mayors, judge executives, regional planning districts, health departments and staff. It is the hope of the members of Boone Trace Project that these decision-makers will be able to use this local data to support budget and policy decisions that improve the built environment, which in turn will better support walking and cycling. This report will also be shared with citizen groups that work towards making their cities more walkable.

Data Collection and Analysis

Data Collection Tools

A walkability checklist was developed with support from Madison County Health Department. The Madison County Health Department implemented a formative evaluation of the tool to determine if the walkability checklist was an effective tool for raising awareness amongst the general public and elected officials about walkability in their neighborhoods. Formatting changes were made to the checklist following this formative evaluation to make the survey easier to use.

The checklist was designed to measure four main categories associated with a walkable community: ease, driver behavior, enjoyment, and safety rules.

To measure how a locality rated in regards to the individual categories, the checklist consisted of questions that aimed to capture the "trained walkers'" opinions about the various aspects that make up each individual topic. The checklist was photocopied. Each set of "trained walkers" first mapped a locally assigned neighborhood. The "trained walkers" mapped the neighborhood. The walkability results and map were reviewed by academic and health experts, for accuracy and completeness. Finally, the trained walkers" were certified a observers and assigned to neighborhoods along the five counties of the Boone Trace Trail.

Data Collection Procedures

Trained walkers were members of the Berea College Entrepreneurship for the Public Good Program. The observers were introduced to the checklist through the Safe Routes Program administered by the Madison County Health Department in May 2017. Observers participated in the three step training program. First, 81 student-residents were encouraged to reflect on a 15 minute walk to visit a destination such as a campus building, store, business, school or friend's home. After reflecting on the walk student-residents were encouraged to complete the checklist to identify what could be done to make that area more walkable.

Second a group of 20 student-residents were selected and qualified as trained walkers to provide a description of the walkability area where they resided and map various zones in neighborhoods of their city. The completed checklist and neighborhood maps were reviewed for details, consistency and cross validated with observations of other residents. The data from the checklists were stored in a

searchable database that were exported to excel and compiled for analysis.

Third, the trained walkers were certified and assigned to walk and map eight additional neighborhoods in communities along the four remaining counties of The Daniel Boone Trace Trail including Rockcastle, Laurel, Knox and Bell. Trained walkers were driven into each local community and provided boundaries of the neighborhood areas. Walkers observed the neighborhood areas and drew local map of the assigned areas, and service directory of local businesses of interest to cyclists. Each community was assigned five walkers. Data from the checklists were added to the excel spreadsheet by a research assistant.

Limitations.

Before discussing the implications of the findings and suggestions for the future, the limitations of the checklist and method of data collection must be addressed.

First and foremost, there are some limitations in regards to the method of data collection used. Due to resource constraints, it was necessary to implement a method in which the completion and submission of the checklist was left to the responsibility of the "trained walkers" who were assigned to communities as observers and who received the checklist. As such, the data collected is subject to selection bias. The observers who completed and submitted the checklist may represent a population that has a greater interest in the walkability of their locality than the general population of each of the five counties or may have a specific infrastructure needs that they want addressed. In addition, some observers may have participated simply because they wanted to earn a good grade in the summer school session. Therefore, the method of data collection resulted in a relatively small sample size and the nonrandomized method of data

collection. The produced data may not accurately represent the thoughts and opinions of all local neighborhood residents. Consequently, this data cannot be generalized to beyond the five county population as a whole. In addition to the data collection method, there are also limitations with the checklist itself that need to be addressed. The checklists were completed in daylight. While the checklist does include questions that ask the date and time of day (i.e., am or pm) the observers took their walk. This information does not provide sufficient information to pinpoint exact walking conditions for the observers, such as weather conditions and amount of daylight. These factors could influence some of the responses by the observers, such as the number of people seen and whether or not the path was well lit. Therefore, caution should be taken when reviewing these responses. Finally, the checklist is designed for use in urban and suburban areas and the downtown or core areas of rural communities. Therefore, infrastructure changes referred to in this report are not intended for all sections of rural areas. While there are limitations to the data collected, it provides a starting point for identifying existing supports for walkable communities as well as areas in need of improvement.

County Community Walkability Results

The following table indicates the overall responses from the 10 respondents in Bell County. Part A will include observations and reflections made from Pineville and Part B will include observations and reflections made from Middlesboro.

Part A: Pineville - there were 5 checklists submitted by surveyors. Part B: Middlesboro - there were 5 checklists submitted by surveyors.
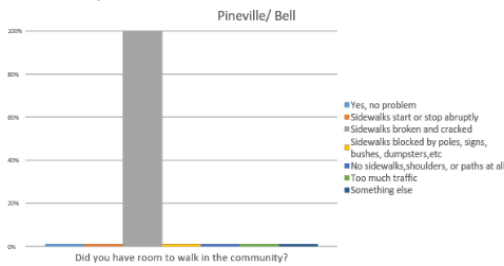
PART A: Pineville

Walkability Survey
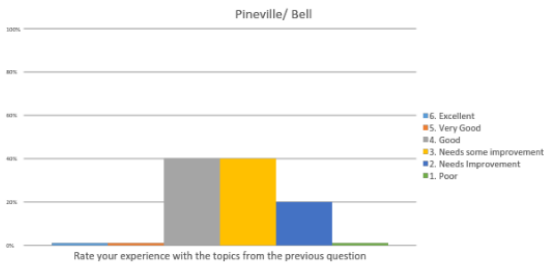### Pineville in Bell County

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Berea College
6/21/2017

Section 1: Ease The first section of the checklist asked people to consider how easy their walk was.
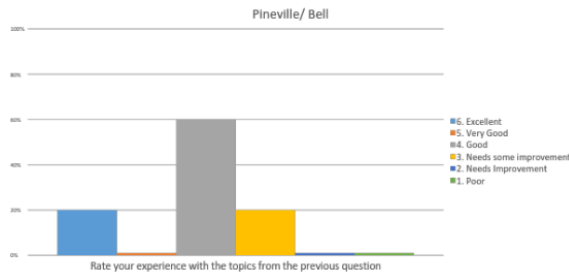
Did you have room to walk in the community?

Pineville/ Bell

Rate your experience- Did you have room to walk in the community?
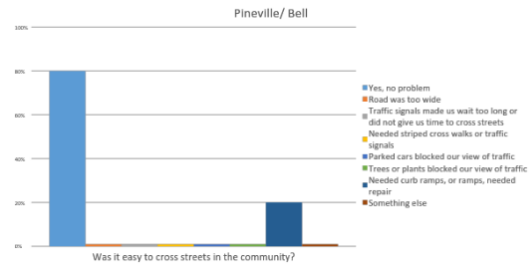

Pineville/ Bell

Section 2: Rate the ease of walking

Rate your experience- Was it easy to cross streets in the community?

Pineville/ Bell

Section 3: Ease to cross the street

Was it easy to cross streets in the community?
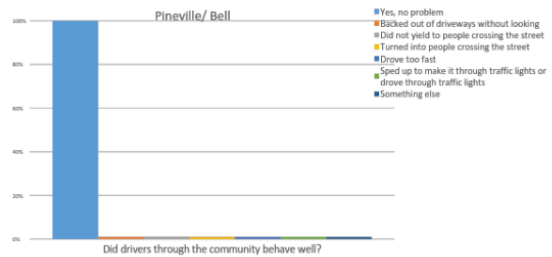

Pineville/ Bell

Location of Problems: Explain W/ sentences

Please describe locations of problems

The observers found that the sidewalks around main street and the downtown center were too small for riding a bike comfortably.

Section 5: Did drivers behave well?

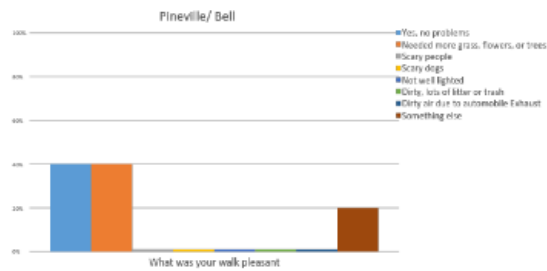### Did drivers through community behave well?

Pineville/ Bell

Section 6: Rate how well the drivers behave

Rate your experience- Did drivers through the community behave well?

Pineville/ Bell
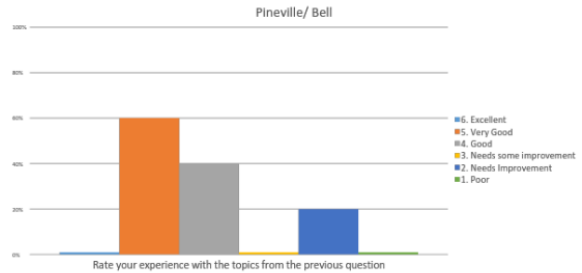
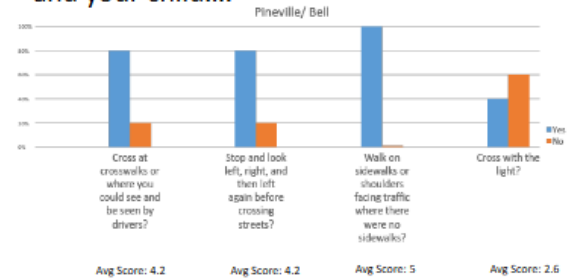Section 7: Was the walk pleasant? DESCRIBE WITH WORDS

Was your walk pleasant?

Please describe locations of problems

The observers realized that due to limited traffic there were zero problems with drivers.

Section 8: Rate the pleasant experience of the walk

Rate your experience- Was your walk pleasant?
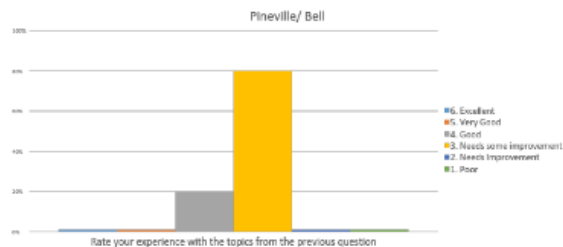
Please describe your feelings that jumped out at you on the walk and elaborate please.

The observers found that all drivers were respectful to the walkers. However, their sidewalks were very small and at times it felt very tight when passing fellow walkers.

In addition, there were no walking signals except near the red light. At this time there is no real need for more traffic lights because of the limited traffic. However, if the community were to expand in the future traffic lights would be needed.

Please describe locations of problems

The observers found that the outside of town square was unappealing because of the old buildings that were falling apart and the town generally lacked greenery which would provide a pleasant aesthetic.

Section 9: Was it easy to follow safety rules? Could you and your child... Cross at crosswalks or where you could see and be seen by the drivers? Stop

and look left, right, and then left again before crossing streets? Walk on sidewalks or shoulders facing traffic where there were no sidewalks? Cross with the light? Yes or No

Was it easy to follow safety rules? Could you and your child....

Section 10: When was the survey taken?

The Walkability surveys were completed May 24-26, 2017

Section 11: Map of the local community created by the observers.

Pineville
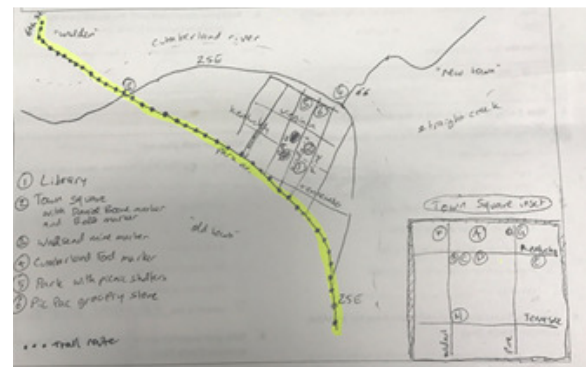
PART B: Middlesboro

Walkability Survey
Middlesboro in Bell County

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Entrepreneurship for the Public Good Program

Berea College

6/21/2107

Section 1: Ease The first section of the checklist asked people to consider how easy their walk was.

Did you have room to walk in the community?

Middlesboro/ Bell

Legend:
- Yes, no problem
- Sidewalks start or stop abruptly
- Sidewalks broken and cracked
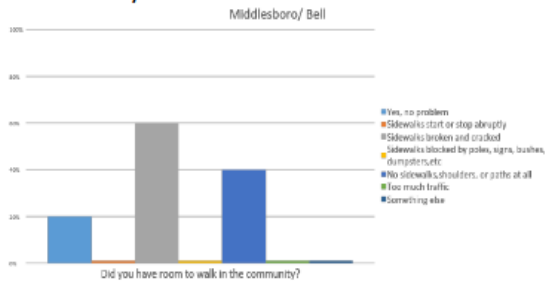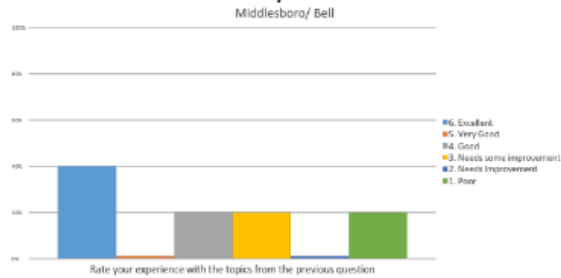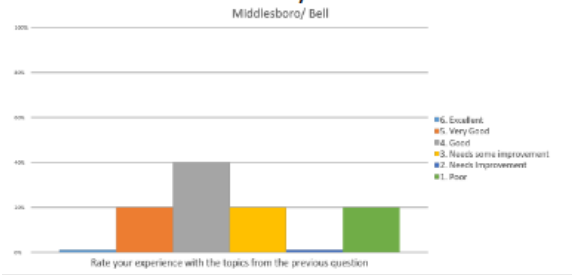- Sidewalks blocked by poles, signs, bushes, dumpsters, etc
- No sidewalks, shoulders, or paths at all
- Too much traffic
- Something else

Did you have room to walk in the community?

Rate your experience- Did you have room to walk in the community?

Middlesboro/ Bell
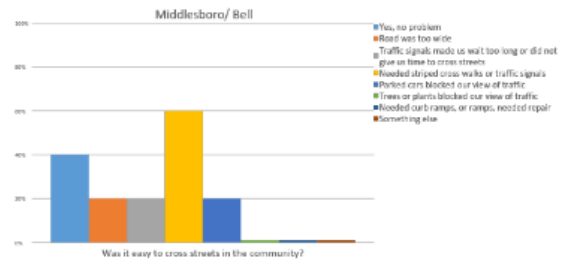
Legend:
- 6. Excellent
- 5. Very Good
- 4. Good
- 3. Needs some improvement
- 2. Needs Improvement
- 1. Poor

Rate your experience with the topics from the previous question

Section 2: Rate the ease of walking

Rate your experience- Was it easy to cross streets in the community?

Middlesboro/ Bell

Legend:
- 6. Excellent
- 5. Very Good
- 4. Good
- 3. Needs some improvement
- 2. Needs Improvement
- 1. Poor

Rate your experience with the topics from the previous question

Section 3: Ease to cross the street

Was it easy to cross streets in the community?

Middlesboro/ Bell

Legend:
- Yes, no problem
- Road was too wide
- Traffic signals made us wait too long or did not give us time to cross streets
- Needed striped cross walks or traffic signals
- Parked cars blocked our view of traffic
- Trees or plants blocked our view of traffic
- Needed curb ramps, or ramps, needed repair
- Something else

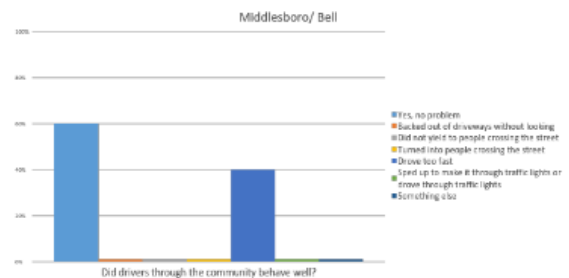Was it easy to cross streets in the community?

Section 4: Location of Problems:

Please describe locations of problems

The observers found that all sidewalks are present and are in great condition except for the absence of sidewalks on 15th street and towards 16th Street the sidewalks start to deteriorate.

Section 5: did driver behave well?

Did drivers through community behave well?

Middlesboro/ Bell

Legend:
- Yes, no problem
- Backed out of driveways without looking
- Did not yield to people crossing the street
- Turned into people crossing the street
- Drove too fast
- Sped up to make it through traffic lights or drove through traffic lights
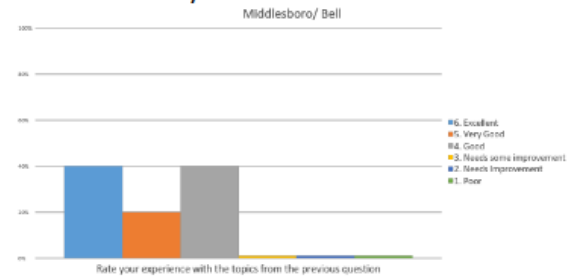- Something else

Did drivers through the community behave well?

Section 6: Rate how well the drivers behave

Rate your experience- Did drivers through the community behave well?

Middlesboro/ Bell

Legend:
- 6. Excellent
- 5. Very Good
- 4. Good
- 3. Needs some improvement
- 2. Needs Improvement
- 1. Poor

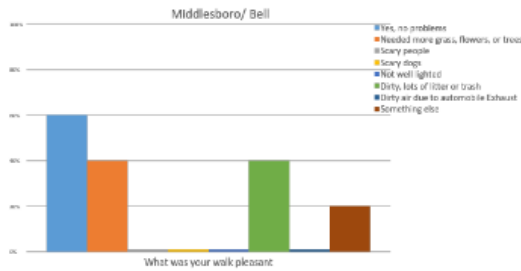Rate your experience with the topics from the previous question

Please describe locations of problems

The observers found that drivers, at times, travel at uncomfortable speeds down Cumberland Avenue.

Section 7: Was the walk pleasant? DESCRIBE WITH WORDS

### Was your walk pleasant?

Please describe locations of problems.

The sidewalks and downtown area are very clean. The worst part was that not all crossing signals work for pedestrians. However, the limited traffic and well marked crosswalks make it possible for walkers to comfortably travel throughout downtown.

Section 8: Rate the pleasant experience of the walk

Rate your experience- Was your walk pleasant?
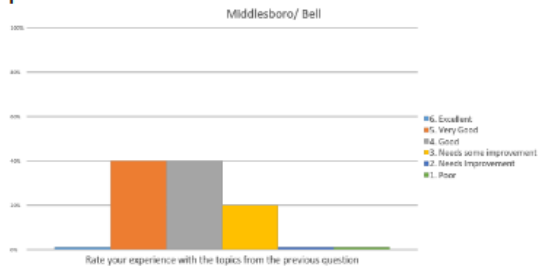
Please describe your feelings that jumped out at you on the walk and elaborate please.

Our Walkability study in Middlesboro took place in two places: the Downtown area and the Daniel Boone bike route. The Downtown area included the area from the 16th street to the 24th street and the Daniel Boone bike route included the area from the intersection of the highway 25 and the Cumberland avenue and up the 15th street.

The Downtown area left a good impression on the team with its wide and clean sidewalks, clear crossing light signals, well marked streets and decent shoulders. On the other hand, the Daniel Boone bike route did not satisfy the members as it was not adequately equipped for bikers/pedestrians. The route lacked sidewalks, shoulders and did not have any crossing marks/lights.

Please describe locations of problems

Along the Daniel Boone Trace Trail, the area needs improvements in cleanliness and pleasantness.

However, the downtown provided a pleasant walking experience up until we were outside of the center of downtown.

Section 9: Was it easy to follow safety rules? Could you and your child… Cross at crosswalks or where you could see and be seen by the drivers? Stop and look left, right, and then left again before crossing streets? Walk on sidewalks or shoulders facing traffic where there were no sidewalks? Cross with the light? Yes or No

Was it easy to follow safety rules? Could you and your child….
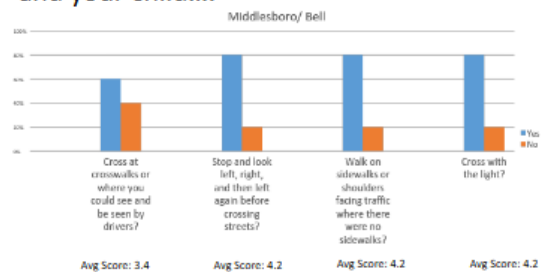
Section 10: When was the survey taken?

The Walkability surveys were completed May 24-26, 2017

Section 11: Map of the local community created by the observers.

Middlesboro

Discussion

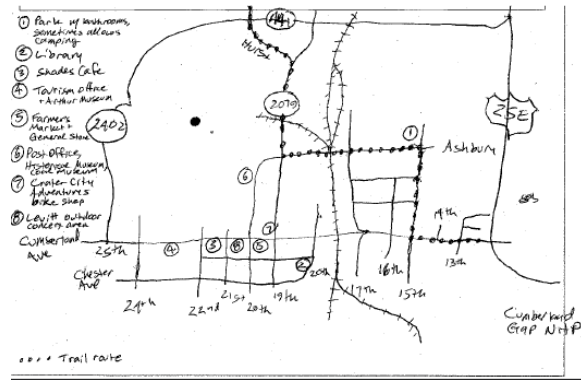A return rate of 10 checklists using trained observers suggests a positive informed response to the walkability checklist requirement. The data will support municipal and regional efforts to compile data on existing supports for walkable communities and neighborhood areas in need of improvement. The discussion that follows provides some suggestions based on the data that was summarized above. This discussion is broken down by the four sections of the checklist and the overall walkability scores that were calculated.

Section 1 -- Ease and Ease to Cross the Street

Research indicates that people cite lack of adequate sidewalks as a barrier for allowing children to walk to school (Ahlport, 2008). According to a study published in the American Journal of Preventative Medicine, "the biggest single factor influencing physical activity around the world is accessibility to sidewalks" (Sallis, 2009). Given that only 52% of respondents indicated that the sidewalks were well maintained and less than half of respondents (45%) noted that sidewalks were not present on both sides of the street where they walked, this would suggest that much can be done to

improve this factor that has a significant impact on the walkability of communities.

Given that only 20% of respondents indicated that the sidewalks were well maintained and less than half of respondents (40%) noted that sidewalks were not present on both sides of the street where they walked, this would suggest that much can be done to improve this factor that has a significant impact on the walkability of communities.

PART A: Pineville - No walking signals except near the red light. At this time there is no real need for more traffic lights because of limited traffic. However, if they were to expand in the future traffic lights would be needed.

PART B: Middlesboro - Not all the crossing signals work. Even this this being so it is easy to cross the street because the traffic in town is not heavy.

Section 2 – Driver Behavior

Making a community more walkable can also make it safer for all who live and work there. The primary safety benefit of increased pedestrian activity is that drivers, seeing pedestrians, often become more cautious and alert and may reduce their driving speeds. Researchers have long argued that driver behavior outweighs physical elements (such as road design) as a causal factor in motor vehicle collisions (Evans, 2004, Boston University, 1976). A fundamental causal component of pedestrian–vehicle collisions is also behavior: that of the driver and that of the pedestrian (Worthington, 1991; Spainhour, et.al., 2006). Most reported pedestrian injuries are the result of collisions with motor vehicles. In 2003, 4,827 pedestrians were killed nationwide while walking down the street (Ernst 2004). Most of the fatalities occurred in urban areas at non-intersection locations at night. "Pedestrian injury is the third-leading cause of unintentional injury-related death among children ages 5 to

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14," even though fewer children are walking (Ernst, 2004). On Delaware state highways in 2006, 26 pedestrians were killed, up from 10 in 2005 (Sanginiti, 2007).

Assuming the presence of adequate pedestrian facilities, when the number of pedestrians increases, walking becomes safer; drivers see the pedestrians and become more alert and cautious, and in time acclimate to their presence. In rural communities that do not provide adequate pedestrian facilities, fewer people walk, and those who do are in far more danger of pedestrian injuries and fatalities because motorists are not accustomed to watching for them. The lack of adequate facilities (sidewalks and crosswalks) also means that pedestrians are physically competing with cars for the same space. Safer streetscapes put the pedestrian first, raising the pedestrian profile through signage, lighting, and clear lines of sight. Other methods of increasing safety include slowing traffic in residential neighborhoods and near schools, maintaining safe walkways separate from the road, providing ample, well designed crosswalks, and teaching children to cross the street safely

PART A: Pineville - Sidewalks were good for the most part until outside of Main Street. Throughout the city, the sidewalks were accessible and allowed to walk safely. Crosswalks are well marked and visible. In the downtown area, there were no crosswalk signals. However, there didn't seem to be a need for them. Moving toward the red light at Pic-Pac to cross over to the Cumberland River and flood wall, the crosswalk is slow and seems dangerous.

PART B: Middlesboro - No problem with drivers. They were respectful to the walkers.

Section 3 – Pleasantness of the Walk

PART A: Pineville - The sidewalks were very small and at times it felt very tight when passing fellow walkers. There is no visible trash around the town however it would be nice to have a couple more trees.

PART B: Middlesboro -The Downtown area left a good impression on the team with its wide and clean sidewalks, clear crossing light signals, well-marked streets and decent shoulders.

Research specifies that distance to destinations affects pleasantness as the single factor that most affects whether or not people decide to walk or to take the car, and is more of a determinant than weather, physical difficulty, safety or fear of crime (Funihashi 1985; Komanoff and Roelofs 1993; Handy 1996; Smith and Butcher 1994). Research to date on pedestrian walking behavior is very limited. Several studies have found that the distance Americans will walk for typical daily trips is quite limited, ranging from 400 ft to about 1 4 mi (Weinstein 1996). Untermann found that 70% of Americans would walk 500 feet for daily errands and that 40% would walk 1/ 5 mi; only 10% would walk 1 2 mi (Untermann 1984).

A pleasant walk has several of the following important attributes: 1. Connectivity of path network, both locally and in the larger community setting; 2. Linkage with other modes: bus, streetcar, subway, train; 3. Fine grained and varied land use patterns, especially for local serving uses; 4. Safety, both from traffic and social crime; 5. Quality of path, including width, paving, landscaping, signing, and lighting; and 6. Path context, including street design, visual interest of the built environment, transparency, spatial definition, landscape, and overall exportability.

Section 4 - Ease to Follow Safety Rules

PART A: Pineville - Crosswalks are well marked and visible. In the downtown area, there were no crosswalk signals. However, there didn't seem to be a need for them.

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PART B: Middlesboro - Not all of the crossing signals work. However, the crosswalks were well marked. We were able to easily cross the street and travel the downtown area.

Pedestrians are prone to higher risk of injuries and fatalities when involved in traffic crashes 22 compared with vehicle occupants. In 2013, 66,000 pedestrians were injured and 4,735 were killed by 23 traffic crashes in the United States, accounting for about 3% and 14% of the total roadway injuries and fatalities, respectively (Administration NHTS, 2013). Research identifies that residential pedestrian's perceived safety and walker protection as the most important criterion. This further validates a number of significant scholarly works which has consistently identified that pedestrians are deterred from walking because of the perceived danger in their walking environments. For example, a national level survey illustrated that 62% of survey respondents identified "danger from motorists" as one of the leading reasons pedestrians feel unsafe while walking (Royal and Miller-Steiger, 2008). In addition, perceived and actual lack of safe and secure environment is a strong deterrent to walking, significantly influencing pedestrian decision to walk, when and where to walk (McMillan 2010). Furthermore, Ziesel (1975) affirmed that an important human need is security which refers to the need to feel safe in a residential environment. Jacobs (1961) reiterated that the presence of strangers within an urban setting would contribute towards the feeling of safety in residential neighborhoods (Loukaitou-Sideris, 2006). As such, while pedestrians consider a multitude of factors when deciding to walk, perceptions of safety and security can strongly encourage or deter walking. Therefore, the provision of safer and secure pedestrian environments is important and potentially critical characteristic of making walking environments more pedestrian friendly.

According to Pacione (2009), the elderly found security, safety and friendliness of a neighborhood as important contributory attributes towards residential satisfaction while ease which refers to the condition of being emotionally and mentally secure, comfortable and stress-free is an essential condition to achieve pedestrian satisfaction. Being at ease in a pedestrian environment allows stress-free participation in such a setting. For example, mentally and emotionally perceiving an environment to be secure from crime would result in a stress-free walk while the perceived knowledge that accidents usually happen along an intersection would make one feel cautious, constantly stressed or even threatened while plying the route. Therefore, ease refers to the need to be relieved from constraints within the walking environment so as to make walking easier. The feeling of relaxation, free from anxiety, and having peace of mind are key phrases, which illustrate relief from constraints or ease of walking

Recommendations

Use of local data

Civic decision makers and local citizens groups interested in infrastructure changes that will improve local walking conditions can review their community's data. This community data collected from completed checklists combined with other local data collection procedures such as traffic studies can help decision makers to prioritize infrastructure projects. Design changes that seem to require the most attention include ensuring sidewalks are in good repair on both sides of streets, improving the condition or type of shops and businesses that people can walk to, adding places for pedestrians to rest along walking routes, improving safety of walking routes by calming traffic and improving lighting.

Continued use of the checklist by residents will provide a growing base of data on existing supports for walkable communities in Kentucky as well as those areas in need of improvement. Kentucky municipalities are encouraged to promote use of the checklist as a way to engage constituents in creating a healthy community.

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Rockcastle, Laurel, Knox, and Bell County Walkability Survey

Walking within a community needs to be safe and easy. Using this tool, take a walk with friends or family and decide if the neighborhood is a friendly place to walk.

1. Did you have room to walk in the community?

- ☐ Yes, no problem (If you check Yes, please skip to question 2)
- ☐ Sidewalks start or stop abruptly
- ☐ Sidewalks broken or cracked
- ☐ Sidewalks blocked by poles, signs, bushes, dumpsters, etc.
- ☐ No sidewalks, shoulders, or paths at all
- ☐ Too much traffic
- ☐ Something else _____

2. Rate your experience with the topics from the previous question (Circle One)

1: Poor   2: Needs Improvement   3: Needs some improvement

4: Good   5: Very   6: Excellent

Please describe locations of problems

```
[                                                    ]
```

3. Was it easy to cross streets in the community?

- ☐ Yes, no problems (If you check Yes, please skip to question4)
- ☐ Road was too wide
- ☐ Traffic signals made us wait too long or did not give us enough time to cross
- ☐ Needed striped crosswalks or traffic signals
- ☐ Parked cars blocked our view of traffic
- ☐ Trees or plants blocked our view of traffic
- ☐ Needed curb ramps, or ramps, needed repair
- ☐ Something else _____

4. Rate your experience with the topics from the previous question (Circle One)

1: Poor   2: Needs Improvement   3: Needs some improvement

4: Good   5: Very   6: Excellent

Please describe locations of problems

```
[                                                    ]
```

5. Did drivers through the community behave well?

- ☐ Yes, no problems(If you check Yes, please skip to question 6)
- ☐ Backed out of driveways without looking
- ☐ Did not yield to people crossing the street
- ☐ Turned into people crossing the street
- ☐ Drove too fast
- ☐ Sped up to make it through traffic lights or drove through traffic lights
- ☐ Something else_____

6. Rate your experience with the topics from the previous question (Circle One)

1: Poor   2: Needs Improvement   3: Needs some improvement

4: Good   5: Very   6: Excellent

Please describe locations of problems

```
[                                                    ]
```

7. Was your walk pleasant?

- ☐ Yes, no problems (If you check Yes, please skip to question 8)
- ☐ Needed more grass, flowers, or trees
- ☐ Scary people
- ☐ Scary dogs
- ☐ Not well lighted
- ☐ Dirty, lots of litter or trash
- ☐ Dirty air due to automobile exhaust
- ☐ Something else_____

8. Rate your experience with the topics from the previous question (Circle One)

1: Poor   2: Needs Improvement   3: Needs some improvement

4: Good   5: Very   6: Excellent

Please describe locations of problems

```
[                                                    ]
```

*Please flip to backside of page to finish the survey

9. **Was it easy to follow safety rules? Could you and your child… (Circle Yes or No)**

Cross at crosswalks or where you could see and be seen by the drivers?

     Yes   No

Stop and look left, right, and then left again before crossing streets?

     Yes   No

Walk on sidewalks or shoulders facing traffic where there were no sidewalks?

     Yes   No

Cross with the light?

     Yes   No

Draw a map of the assigned community, labeling the county and community with north at the top. Sketch the bike route. Label cultural features/assets, Boone Trace historic features, and service directory

---

10. **Please select from the map above the area where you walked in the county or where you collected your Walkability observation. Use the Madison County model to sketch the county. Label cultural features and community assets. Mark Boone Trace historical features in the community. List every service provider based on the UGGR model. (Obtain entity's name, phone number and address on a separate sheet).**

11. **When was this survey taken?**

☐ Spring

☐ Summer

☐ Fall

☐ Winter

    ___/_____ (MM/YYYY)

Walkability Checklist

How walkable is your community?

Take a walk with a child and decide for yourselves.

Everyone benefits from walking. These benefits include: improved fitness, cleaner air, reduced risks of certain health problems, and a greater sense of community. But walking needs to be safe and easy. Take a walk with your child and use this checklist to decide if your neighborhood is a friendly place to walk. Take heart if you find problems, there are ways you can make things better.

Getting started:

First, you'll need to pick a place to walk, like the route to school, a friend's house or just somewhere fun to go. The second step involves the checklist. Read over the checklist before you go, and as you walk, note the locations of things you would like to change. At the end of your walk, give each question a rating. Then add up the numbers to see how you rated your walk overall. After you've rated your walk and identified any problem areas, the next step is to figure out what you can do to improve your community's score. You'll find both immediate answers and long-term solutions under "Improving Your Community's Score..." on the third page.
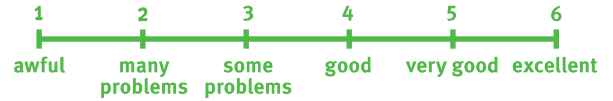
How walkable is your community?

Location of walk

Rating Scale:

1	2	3	4	5	6
awful	many problems	some problems	good	very good	excellent

1. Did you have room to walk?

☐ Yes ☐ Some problems:

  ☐ Sidewalks or paths started and stopped
  ☐ Sidewalks were broken or cracked
  ☐ Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc.
  ☐ No sidewalks, paths, or shoulders
  ☐ Too much traffic
  ☐ Something else _____

Rating: (circle one)   Locations of problems:
  1 2 3 4 5 6   _____

2. Was it easy to cross streets?

☐ Yes ☐ Some problems:

  ☐ Road was too wide
  ☐ Traffic signals made us wait too long or did not give us enough time to cross
  ☐ Needed striped crosswalks or traffic signals
  ☐ Parked cars blocked our view of traffic
  ☐ Trees or plants blocked our view of traffic
  ☐ Needed curb ramps or ramps needed repair
  Something else _____

Rating: (circle one)   Locations of problems:
  1 2 3 4 5 6   _____

3. Did drivers behave well?

☐ Yes ☐ Some problems: Drivers ...

  ☐ Backed out of driveways without looking
  ☐ Did not yield to people crossing the street
  ☐ Turned into people crossing the street
  ☐ Drove too fastp
  ☐ Sped up to make it through traffic lights or drove through traffic lights?
  ☐ Something else _____

Rating: (circle one)   Locations of problems:
  1 2 3 4 5 6   _____

4. Was it easy to follow safety rules? Could you and your child...

☐ Yes ☐ No Cross at crosswalks or where you could see and be seen by drivers?

☐ Yes ☐ No Stop and look left, right and then left again before crossing streets?

☐ Yes ☐ No Walk on sidewalks or shoulders facing traffic where there were no sidewalks?

☐ Yes ☐ No Cross with the light?

Rating: (circle one)   Locations of problems:
  1 2 3 4 5 6   _____

5. Was your walk pleasant?

☐ Yes ☐ Some problems:

  ☐ Needed more grass, flowers, or trees
  ☐ Scary dogs
  ☐ Scary people
  ☐ Not well lighted
  ☐ Dirty, lots of litter or trash
  ☐ Dirty air due to automobile exhaust
  ☐ Something else _____

Rating: (circle one)   Locations of problems:
  1 2 3 4 5 6   _____

How does your neighborhood stack up? Add up your ratings and decide.

1. _____
2. _____
3. _____
4. _____
5. _____
Total: _____

26–30 Celebrate! You have a great neighborhood for walking.

21–25 Celebrate a little. Your neighborhood is pretty good.

16–20 Okay, but it needs work.

11–15 It needs lots of work. You deserve better than that.

5–10 It's a disaster for walking!

Improving your community's score

	What you and your child can do immediately	**What you and your community can do with more time**

1. Did you have room to walk?

Sidewalks or paths started and stopped
Sidewalks broken or cracked
Sidewalks blocked
No sidewalks, paths or shoulders
Too much traffic

- pick another route for now
- tell local traffic engineering or public works department about specific problems and provide a copy of the checklist

- speak up at board meetings
- write or petition city for walkways and gather neighborhood signatures
- make media aware of problem
- work with a local transportation engineer to develop a plan for a safe walking route

2. Was it easy to cross streets?

Road too wide
Traffic signals made us wait too long or did not give us enough time to cross
Crosswalks/traffic signals needed
View of traffic blocked by parked cars, trees, or plants
Needed curb ramps or ramps needed repair

- pick another route for now
- share problems and checklist with local traffic engineering or public works department
- trim your trees or bushes that block the street and ask your neighbors to do the same
- leave nice notes on problem cars asking owners not to park there

- push for crosswalks/signals/ parking changes/curb ramps at city meetings
- report to traffic engineer where parked cars are safety hazards
- report illegally parked cars to the police
- request that the public works department trim trees or plants
- make media aware of problem

3. Did drivers behave well?

Backed without looking
Did not yield
Turned into walkers
Drove too fast
Sped up to make traffic lights or drove through red lights

- pick another route for now
- set an example: slow down and be considerate of others
- encourage your neighbors to do the same
- report unsafe driving to the police

- petition for more enforcement
- request protected turns
- ask city planners and traffic engineers for traffic calming ideas
- ask schools about getting crossing guards at key locations
- organize a neighborhood speed watch program

4. Could you follow safety rules?

Cross at crosswalks or where you could see and be seen
Stop and look left, right, left before crossing
Walk on sidewalks or shoulders facing traffic
Cross with the light

- educate yourself and your child about safe walking
- organize parents in your neighborhood to walk children to school

- encourage schools to teach walking safely
- help schools start safe walking programs
- encourage corporate support for flex schedules so parents can walk children to school

5. Was your walk pleasant?

Needs grass, flowers, trees
Scary dogs
Scary people
Not well lit
Dirty, litter
Lots of traffic

- point out areas to avoid to your child; agree on safe routes
- ask neighbors to keep dogs leashed or fenced
- report scary dogs to the animal control department
- report scary people to the police
- report lighting needs to the police or appropriate public works department
- take a walk wih a trash bag
- plant trees, flowers in your yard
- select alternative route with less traffic

- request increased police enforcement
- start a crime watch program in your neighborhood
- organize a community clean-up day
- sponsor a neighborhood beautification or tree-planting day
- begin an adopt-a-street program
- initiate support to provide routes with less traffic to schools in your community (reduced traffic during am and pm school commute times)

A Quick Health Check

Could not go as far or as fast as we wanted
Were tired, short of breath or had sore feet or muscles
Was the sun really hot?
Was it hot and hazy?

- start with short walks and work up to 30 minutes of walking most days
- invite a friend or child along
- walk along shaded routes where possible
- use sunscreen of SPF 15 or higher, wear a hat and sunglasses
- try not to walk during the hottest time of day

- get media to do a story about the health benefits of walking
- call parks and recreation department about community walks
- encourage corporate support for employee walking programs
- plant shade trees along routes
- have a sun safety seminar for kids
- have kids learn about unhealthy ozone days and the Air Quality Index (AQI)

Great Resources

WALKING INFORMATION

Pedestrian and Bicycle Information Center (PBIC)
UNC Highway Safety Research Center
Chapel Hill, NC
www.pedbikeinfo.org
www.walkinginfo.org

National Center for Safe Routes to School
Chapel Hill, NC
www.saferoutesinfo.org

For More Information about Who Can Help Address Community Problems
www.walkinginfo.org/problems/help.cfm

State Bicycle & Pedestrian Coordinators
http://www.walkinginfo.org/assistance/contacts.cfm

FEDERAL POLICY, GUIDANCE AND FUNDING SOURCES FOR WALKING FACILITIES

Federal Highway Administration
Bicycle and Pedestrian Program
Office of Natural and Human Environment
Washington, DC
www.fhwa.dot.gov/environment/bikeped/index.htm

PEDESTRIAN SAFETY

Federal Highway Administration
Pedestrian and Bicycle Safety Team
Office Of Safety
Washington, DC
http://safety.fhwa.dot.gov/ped_bike/

National Highway Traffic Safety Administration
Traffic Safety Programs
Washington, DC
www.nhtsa.gov/Pedestrians

SIDEWALK ACCESSIBILITY INFORMATION

US Access Board
Washington, DC
Phone: (800) 872-2253;
(800) 993-2822 (TTY)
www.access-board.gov