City of Washington
Plan for:

Safe Routes To School

Prepared for:

The City of Washington

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CHAPTER 1 INTRODUCTION

A. VISION OF THE WASHINGTON SAFE ROUTES TO SCHOOL PLAN

The City of Washington envisions the Safe Routes to School Plan to deliver a comprehensive approach to effectively and efficiently create safe pathways that will enable children to travel on foot or bike between their home, school and other recreational facilities. The trail system was not only designed to get children safely from point A to point B, but was also developed to influence ALL residents to rediscover the healthy benefits of living an active lifestyle, reduce the community's reliance on motorized vehicles for short trips, and improve the air quality in the city.

B. SAFE ROUTES TO SCHOOL PROGRAM (SRTS PROGRAM)

Funding for this Safe Routes to School Plan has been provided by the Federal Highway Administration's (FHWA) Safe Routes to School Program, which is administered by the Indiana Department of Transportation (INDOT). Today, over half of all children arrive at school in private automobiles, one-quarter arrive via school bus, and fewer than 15 percent of all school trips are made by walking or bicycling[1]. The Safe Routes to School Program was created to increase the number of children walking and biking to school in an effort to decrease the obesity rate and reduce congestion around schools. Also, children who walk or bike to school have shown to have an increased attention span at school than those children who arrive via school bus or personal automobiles.

The SRTS program is geared to address the physical and educational elements that prevent walking and biking to school. This plan will focus on improving areas viewed as "unsafe" and offer educational resources that will provide children, parents, and other residents the confidence and knowledge that will allow students to safely travel to and from school without the aid of a motor vehicle.

C. ADDRESSING THE FIVE E'S

The key to a successful SRTS program is by addressing the five E's:

Engineering. Proper engineering of trails, sidewalks and crosswalks creates safer conditions for walking and biking as well as influences the way people behave.

Education. Through educational programs, students can gain the knowledge to identify safety issues and the skills to cope with them. The SRTS program also educates parents on how to help their children master these traffic safety skills as well as educate them on the benefits of allowing their children to participate in healthy lifestyle activities. Driver safety campaigns can also be found associated to the Safe Routes to School program. These campaigns help drivers alter their behavior behind the wheel when approaching areas that are most likely to attract walking or biking children.

Encouragement. Participating in activities that promote walking to school as a fun activity will help increase the popularity of the program. This can be done through a variety of activities including having children create posters or having a walk-a-thon.

Enforcement. Enforcement improves driver behavior, helps children follow traffic rules and increase awareness of pedestrians and bicyclists. This tends to be done through the help of the local police department and crossing guards.

Evaluation. The National Center for Safe Routes to School have created surveys that all schools who are involved with the SRTS program are strongly encouraged to participate in. These surveys are geared for schools that teach children in kindergarten to eighth grade. Parents and teachers are asked to fill out the surveys once a year, typically in the spring or fall. The results of these surveys help officials measure the success of the program by identifying current trends and attitudes. More importantly it helps officials understand the effectiveness of instituted activities and projects.

D. WASHINGTON SAFE ROUTES TO SCHOOL SETTING

Washington is located in southwest Indiana at the intersection of US 50 and SR 57 in Daviess County. According to the 2009 US Census estimates, Washington has a population of 11,637. Washington covers approximately 4.73 square miles and is considered to have a low population density (2,458 people per square mile).

1 Data was provided by the 2001 National Household Travel Survey conducted by the FHWA.

The future I-69 corridor is currently under construction and will pass along the east side of Washington. It is slated to be completed in the Washington area in the fall of 2012. An interchange will be located at US 50 east of the intersection of US 50 and Old Business 50. Traffic along Old Business 50 into the City of Washington is expected to increase and future development in this vicinity is forthcoming. However, there are plans to upgrade this corridor in order to maintain a reasonable level of service for vehicular and non-vehicular travel.

E. SCHOOL AND COMMUNITY INVOLVEMENT

The SRTS planning project was kicked off with a meeting on February 9, 2010. Meeting attendees were asked a series of questions that helped planners begin the trail conceptualization process. The questions included:

- Which neighborhoods contain the largest number of students who would benefit the most from the development of new sidewalks?
- Besides the schools, what other places would children and adults most likely bike and walk to, if that option was available?
- Where do you tend to see the most walkers and bicyclists? Are they traveling on a sidewalk? Traveling in the street?
- Thinking as a pedestrian or bicyclist, which intersections and streets would you want to avoid and why?

The answer to these and other questions provided planners from Bernardin, Lochmueller and Associates the ability to develop a list of key places that the trail should connect to and provided some insight into potential routes.

The second meeting, held on September 14, 2010, introduced the Washington School District's superintendent and principals to the initial concept of the trail system to ensure the route would meet the needs of their students. This meeting allowed the group to make comments and suggestions which led to some minor changes to the initial trail system concept.

A final meeting between teachers, school officials, the police chief and the mayor, occurred on March 16, 2011. The purpose of the meeting was to discuss possible educational activities that could be implemented at a school or community level to promote the concept of healthy living through the use of the trail system.

The meeting revealed that many of the schools were already beginning to host activities that promote healthy living concepts to school-aged children. These activities will be vital to a successful SRTS program. Attendees also discussed other potential uses for the trail system, such as hosting a road run meet, walk-a-thons for charities, creating a tour that focused on important sights and landmarks around Washington, and using the trail for a "living classroom" by developing educational materials identifying plant life along the trail.

CHAPTER 2 EXISTING CONDITIONS

A. CURRENT SIDEWALK CONDITIONS

Sidewalk conditions vary throughout the city. Neighborhoods built since the 1980's tend to not have sidewalks, yet the neighborhoods have larger lot sizes and have the ability to accommodate future walkways. Older neighborhoods and commercial areas in Washington contain sidewalks, however they are often less than five-foot-wide, are not ADA compliant, and are in a range from excellent to poor condition. Constructing new sidewalks or expanding existing walkways in older neighborhoods presents a challenge because older neighborhoods are more apt to contain smaller lot sizes and structures tend to be built closer to the street.

Recent projects, including the downtown revitalization project have allowed the city to remove and replace crumbling walkways. The Lena Dunn SRTS project has allowed the city to create new sidewalks linking the school to the neighborhoods and recreation areas located to the north, east and south of the elementary school. The Maple Street SRTS project will be completed in Spring of 2011, providing a better connection between North Elementary, Washington Junior /Senior High School, Waterworld of Washington and neighborhoods located west of SR 57. Figure 1 indicates the location of existing sidewalks and sidewalk improvement projects that have occurred from 2009 to 2011.

The new Westwood Crossing Housing Development will be located south of Maxwell Street and will contain 30 apartments and 19 single-family units for low to moderate-income people. During the SRTS planning project and the housing project process, Mayor Larry Haag continually encouraged coordination between the two teams to ensure that the new housing project could adequately provide sidewalks that would link to the existing SRTS Lena Dunn sidewalk project and incorporate the proposed trail design outlined in this document. The housing project should be completed by the end of 2012 and the proposed walkways are shown in Figure 1.

B. TRIP GENERATORS

Trip generators are places that attract people to a single location. This can include schools, libraries, parks, and commercial areas. When designing the route the trail should follow, great strides were made to identify neighborhoods where the most potential walkers would come from, where these walkers would want to travel to, and what would their experience be once they were on the trail.

1. Targeted Population

As discussed in the public involvement section, steering committee members were asked to identify neighborhoods that contain a large number of students who would benefit the most from the development of new sidewalks. The walkways would increase their mobility, allowing students to safely walk to school and other destinations such as recreational facilities and commercial areas. Some locations identified in this map

Table 1: School Population and Free and Reduced Lunch Statistics

School Name	Grade Level	# of Students for the 2009-2010 School Year	Percentage of Students Who Receive Free Lunch	Percentage of Students Who Received Reduced Cost Lunch
Helen Griffith Elementary	KG - 06	432	66%	8%
North Elementary	KG - 06	397	38%	9%
Lena Dunn Elementary	KG - 06	358	75%	13%
Washington Junior High	07 - 08	399	48%	7%
Washington High	09 - 12	760	29%	8%
Total		2346	48%	9%

are considered low-income neighborhoods. According to the Safe Routes to School "Implementing Safe Routes to School in Low-income Schools and Communities," children from low-income families are twice as likely to walk to school as children from higher-income families, however they have a higher risk of being killed or injured as pedestrians. Special consideration was taken to ensure these areas were connected or within close walking distance to the trail system. Figure 2 identifies the location of these targeted neighborhoods in relation to existing schools and recreational facilities.

2. Educational Facilities

The Washington School Corporation oversees the Washington High School, Washington Junior High, and the four elementary schools: Veale Elementary, North Elementary, Helen Griffith Elementary and Lena Dunn Elementary. Veale Elementary was not included in the consideration of creating this plan because it is located outside of the city limits. Although High Schools are not traditionally involved in survey activities related to securing SRTS funding through the National Safe Routes to Schools Grant, the close proximity of Washington High School to the Washington Junior High School and North Elementary allowed the trail system to serve the high school too.

Of the approximately 2,346 students that attend one of the five public schools located within the city limits of Washington, 48 percent of students participate in the Free Lunch Program and nine percent participate in the Reduced Cost Lunch Program. Lena Dunn and Helen Griffith Elementary Schools have the largest participants of the Free Lunch Program with approximately 75 percent and 66 percent, respectively, of students. Table 1 provides student population numbers and free and reduced lunch participation percentages in greater detail.

Other private schools located within the city limits of Washington include the Washington Catholic School System and Trinity Holiness Academy.

Carnegie Public Library is located on West Main Street, west of downtown Washington. The library offers various adult and youth activities throughout the year.

Locations of the schools can be seen in Figure 3.

3. Parks

Washington maintains five parks in the city. Each park is unique and offers a variety of amenities. The Washington Parks System includes:

a. South Park

South Park is located along SR 57 and is ½ mile south of the Black Buggy Restaurant. The nine-acre park contains two basketball courts, two softball fields, a

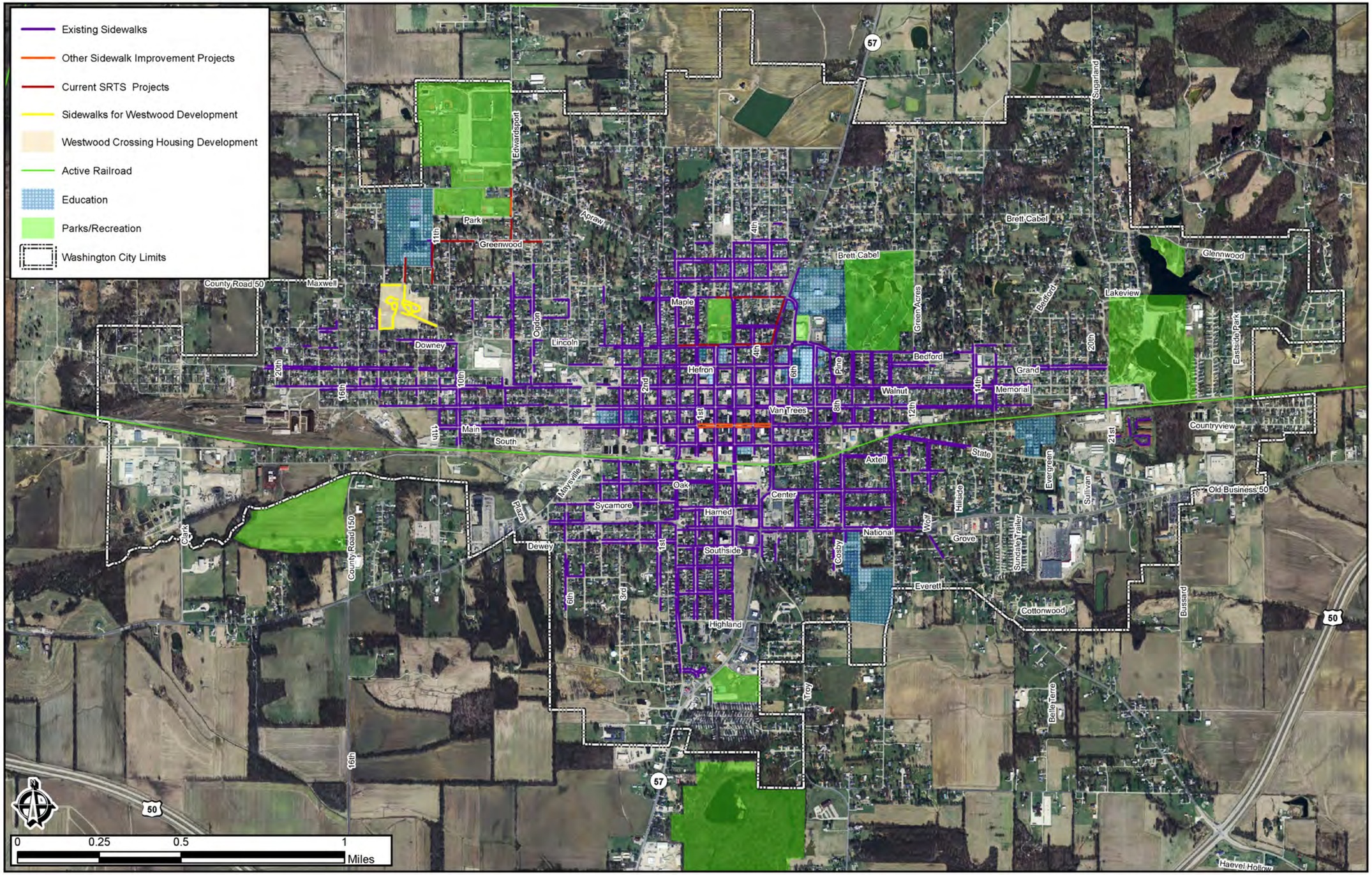
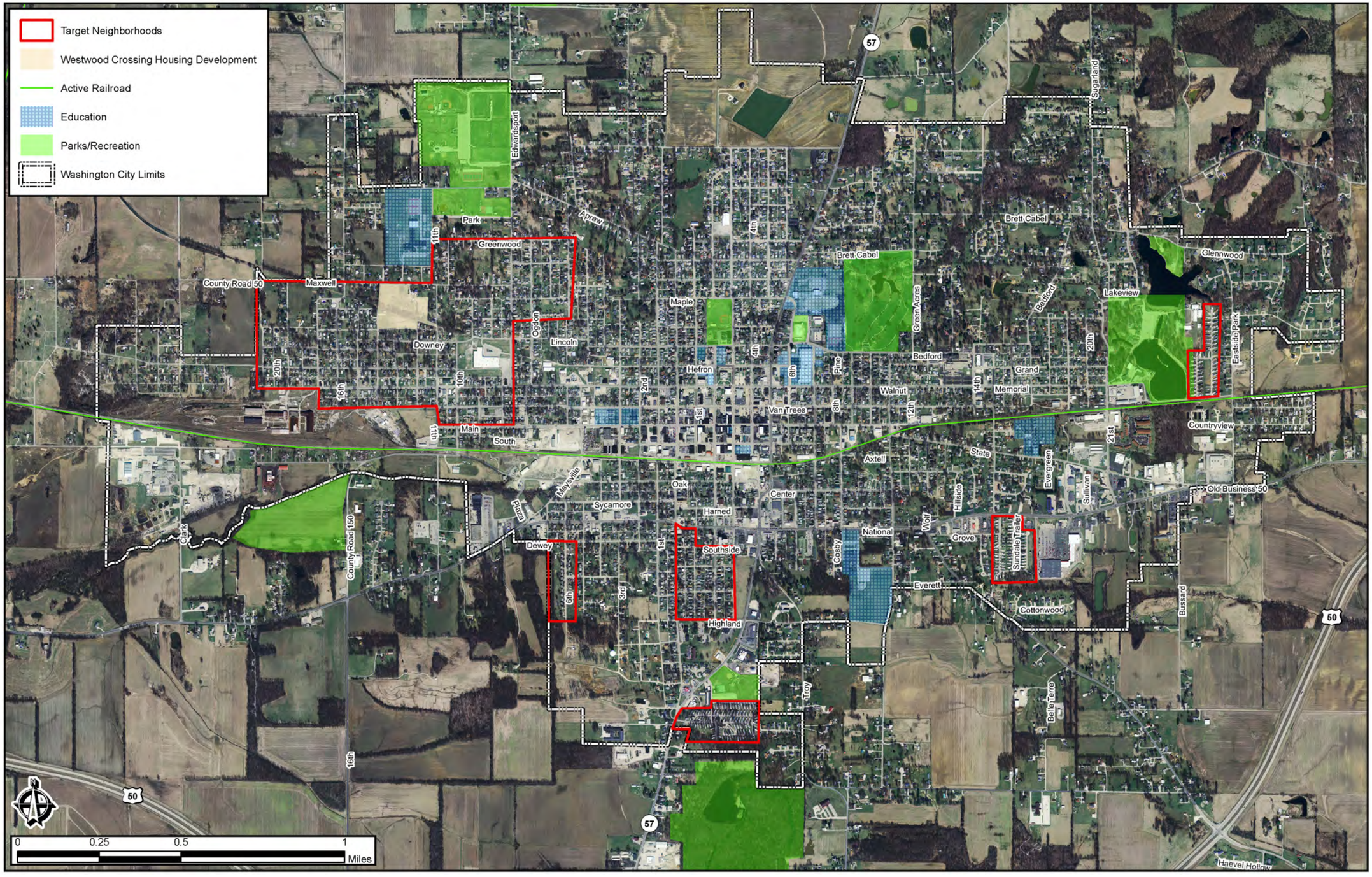


Figure 1: Existing Walkways

Figure 2: Targeted Neighborhoods



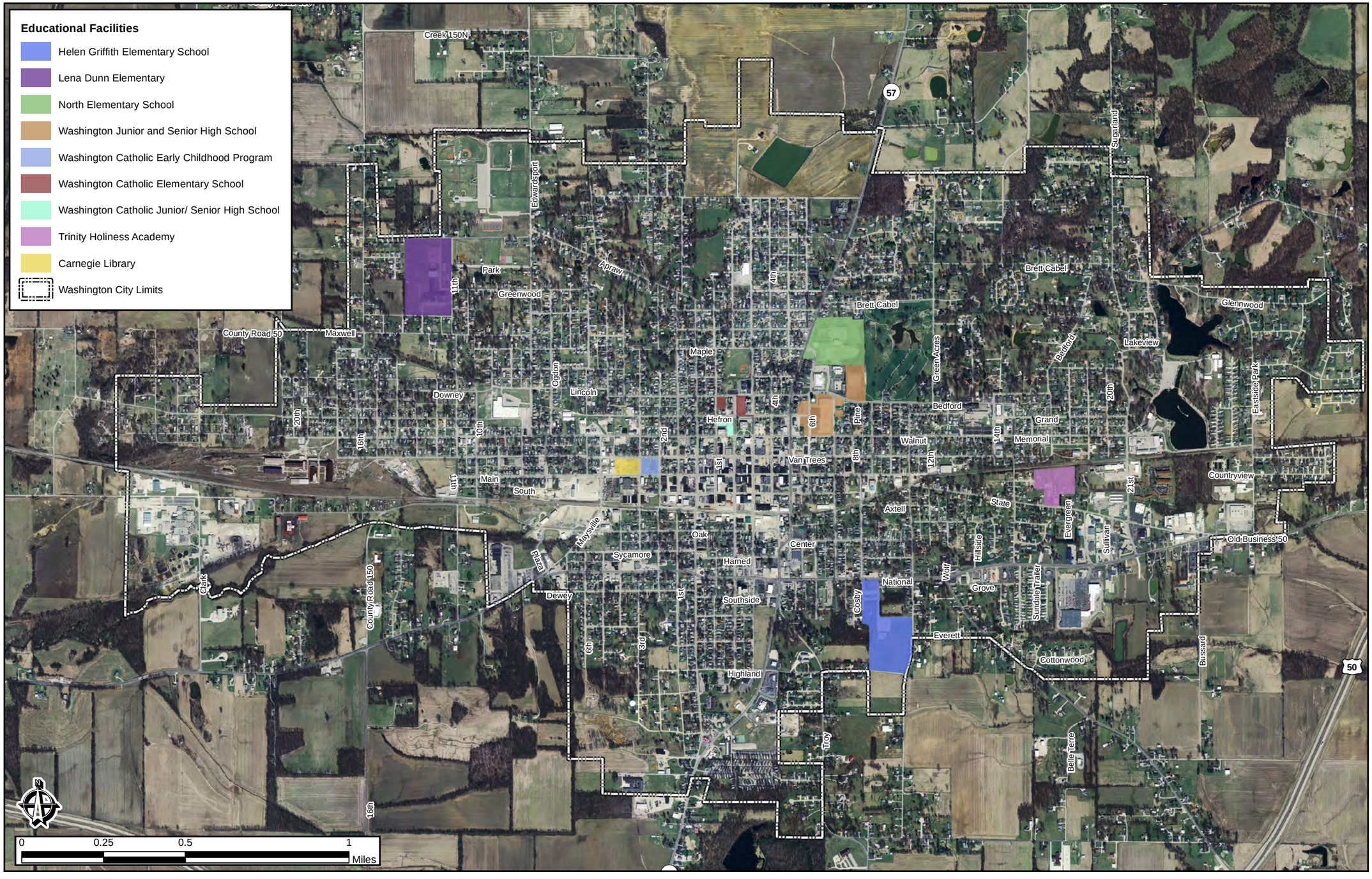


Figure 3: Educational Facilities

soccer field, a shelter house and a playground. The park also contains a large parking lot which has enabled the park to host small sporting events. Even though this park has excellent amenities, its close proximity to a busy state road, lack of a controlled crosswalk across SR 57, and lack of sidewalks may steer potential park users away. For most potential South Park users, the only safe way to access this recreational facility is through the use of a car.

b. Eastside Park

Eastside Park is one of the most popular parks in the Washington Parks System. On any given sunny day, the park is flooded with families, fishermen, bicyclists and walkers. This park spans over 50 acres and contains two lakes stocked with fish. Highlights of the park include a screened-in pavilion that provides picnic table seating for approximately 200 people, an enclosed community building that can accommodate approximately 300 people, a large bandstand, a playground and a war memorial called “The Hill of Heroes”. The available amenities and open space allow the park to host the Washington 4th of July Celebration as well as a popular Christmas lights display. Other amenities available include two gazebos, two basketball courts, four shelter houses, paddle boat rentals, a miniature trail, horseshoe pits, and charcoal grills and picnic tables throughout the park. The facility contains adequate parking.

In recent years, the city has made an effort to better connect the park to the surrounding neighborhoods. A sidewalk project was completed on Grand Avenue; however city officials have noticed that people still prefer to walk along the street on Memorial Avenue. Other surrounding neighborhoods lack connecting sidewalks to the park.

c. Longfellow Park

Longfellow Park is a 12 acre park located east of Lena Dunn Elementary at the corner of Front Street and Longfellow Ave. A skate park was recently built at the park attracting a younger crowd to the facility. There is more than adequate parking located along the south side of the park. The park also contains two shelter houses, a playground, a softball field and a few basketball hoops. The city was recently awarded a Safe Routes to School (SRTS) grant to construct sidewalks along Front Street, adjacent to the park, Greenwoods Avenue and southward on 11th Street, ultimately linking Lena Dunn to the park. Construction of these sidewalks was completed in 2010.

d. Gwaltney Sports Complex

Gwaltney Sports Complex covers approximately 55 acres and is home to five soccer fields, eight softball fields, six tennis courts and a playground. The complex is located directly north of Longfellow Park on the northwest side of the city. The sports complex hosts multiple sporting events on weekends throughout the warm weather months, causing the park to be a lively place. Due to the park layout and size of the facility, it is not uncommon to see a number of walkers and joggers running on the roadway that encircles the soccer fields. The distance around the soccer fields is 0.69 miles. Although the parking lot is adequate for the average volume of park goers, special events, such as little league competitions, can cause the parking lot to be over capacity.

The primary way for most people to access Gwaltney Park is via personal vehicle, however, the city may begin to see a change in the near future with the construction of the previously mentioned SRTS grant constructed sidewalks.

e. Waterworld of Washington (WOW)

Waterworld of Washington is the new splash park facility (Opened August 7th, 2009) located at the corner of 6th Street and Bedford Road. The park features four slides and multiple kid-friendly water features like the rain drop mushroom and water circle sprayers. The park is conveniently located in the center of the city, where multiple surrounding neighborhoods can access the pool facility via sidewalks. Parking adjacent to the facility is limited, however additional parking can be found to the north at the North Elementary School grounds, or to the south at the Washington High School campus.

Other recreational facilities in the Washington area include the YMCA, located at the corner of Flora Street and Northeast 3rd Street, and the Washington Country Club located along Bedford Road, east of the North Elementary School.

4. Commercial Areas

There are many other generators in Washington that are not public facilities. These include retail businesses like grocery stores (Jay-C Food Store) and general merchandise stores (Wal-Mart) and restaurants and eateries like Mason's Root beer Drive In. Most of the retail businesses and restaurants are located along SR 57 and old US 50. The trail was designed to allow better access via alternative transportation methods.

C. BUS SERVICE

The Washington Community School Corporation operates 21 bus routes which serves the junior high, high school and all public elementary schools in the corporation. A typical bus route costs a school district $25,000 to $35,000 per year (national average of $4.50 a mile) and holds approximately 52 to 56 students.

The cost of operating a school bus route can fluctuate depending on the distance the bus travels and how many stops the bus makes. It is common practice for the bus to provide door-to-door service for children who live in a rural setting, where walking to a single bus stop where multiple children meet is not a reasonable or safe option. In the last few decades, door-to-door service has been also used in some situations where the student resides in a subdivision that lacks sidewalks which would require the student to walk in the street to reach a single drop off/pick-up point in the neighborhood. Addressing sidewalk issues in these situations is beyond the scope of this project, however it is important to recognize that these situations exist. Future problems with new subdivisions can be detered by requiring developers to construct sidewalks in all new developments.

In some circumstances, children who live in close proximity to the school are bused in even though they could potentially walk if safety issues along their intended pathway were addressed. The design of the trail systems seeks to address these issues and concerns through education and engineering activities.

D. BARRIERS

Barriers to a successful SRTS program can come in many forms, whether the barriers are real or perceived. Acknowledging and addressing them early on during the

program development stage will help ensure the success of the program.

1. Safety issues

Every effort was made to identify safety issues along the proposed trail route when possible. Some of the issues that were discovered include:

- Intersections contain high traffic volumes which may require pedestrian islands or bump-outs to create less time where a pedestrian will remain in the way of oncoming traffic.
- Intersections that may need to become a controlled intersection by adding signals. This will require a warrant study prior to any upgrades.
- Crosswalks may need to be repainted to increase visibility for drivers.
- Improve signage or relocate existing signage to a more visibile location in an effort to alert drivers to the presence of children. This may be very helpful in areas that have short sight distance between the driver and crosswalk.
- Intersections that would benefit from the presence of a crossing guard due to high traffic volumes or traffic patterns that may be confusing and unpredictable for young people.
- Lack of sidewalks within neighborhoods that are connected to the trail.
- The need to re-route student pickup/drop-off traffic away from the school's main pedestrian walkways.
- Use traffic calming measures around school zones.

2. Policies and Procedures

Schools and communities have different policies in place that may help support or conflict with the needs of a successful SRTS Program. Identifying and addressing all policies of this nature will help eliminate policy barriers.

a. School Wellness Policy

Starting June of 2004, all schools who participate in the National School Breakfast Program or the National School Lunch Program are required to have a written School Wellness Policy. The wellness policy contains a set of goals that are geared to improve students' nutrition and physical activity level.

The wellness policies that are in place at the local elementary schools are in line with the standard wellness policy mandated by the state. None of the stated policies are anticipated to hinder the SRTS program. However, there is room to enhance the schools' wellness policies to support the SRTS initiative. Enhancements could include increasing the minimum amount of time students are engaged in daily fitness activities.

b. Other School Policies and Procedures

Other school policies and procedures that can affect SRTS program participation rates include policies on heavy backpacks, the adverse effects of staggered release

times based on the student's mode of transportation, and policies regarding the location of new schools.

As children progress in grades, more homework tends to be required. This typically leads to the student carrying more books between home and school, reducing their willingness to walk. The school may want to consider adopting a policy to reduce the need for children to carry multiple texts home. Can the students' access educational materials via the internet opposed to a textbook? Can the student bring home lighter handout materials or workbooks?

To reduce the potential of vehicle/pedestrian conflicts, many schools have adopted policies to protect students who walk to and from school by holding their walking students longer after school. Unfortunately, in the eyes of the students, this can be perceived as a punishment for walking. As an incentive to students who walk or bike, the school may consider an earlier release time for these students.

As the City of Washington continues to grow, there will be a future need to expand the school district by constructing new schools. The location of these new schools can make or break a SRTS program. Some school districts in Indiana have chosen to construct new schools in rural areas, where the land is cheaper, however this causes every student to be transported between home and school either by busses or a personal vehicle. The long-term transportation costs of this type of decision can sometimes outweigh the savings incurred by constructing in a rural setting. Currently, there are no policies in place that require any new school to be built within the city limits or within an area with a higher population density.

c. City Policies

Some cities have adopted policies that prevent bicyclists, skateboarders and roller-bladers from using public spaces like sidewalks. According to the Washington Police Department, there are no policies in place, like the one mentioned above, that would prevent or deter the use of the trail system upon completion.

3. Parents

Parents tend to be the number one barrier to a successful SRTS program. This mostly can be attributed to the fear of the unknown and the lack of available information. A survey conducted prior to the funding of the SRTS Plan indicated that some parents felt that it was too dangerous (for a myriad of reasons) for their children to walk to school.

The Education & Encouragement Chapter provides some guidance for addressing these fears, whether the fear is real or perceived.

4. Residents Living Adjacent to the Trail

It is presumed that residents living along the proposed trail route will fall into three categories: residents who support the trail system, residents who do not want the trail system (especially on their property), and residents who do not have an opinion on the matter. Similar to the fear of the unknown that parents often feel at the onset of a SRTS project, those who do not support the development of the trail system tend to do so because false information is circulating through the general public. Methods to providing the necessary information to dispel this misinformation can be found in the Education & Encouragement Chapter.

CHAPTER 3 EDUCATION & ENCOURAGEMENT

A. WASHINGTON SAFE ROUTES TO SCHOOL EDUCATIONAL PROGRAM

One of the main goals of the Safe Routes to School Program is to change the way we think about our children walking and bicycling to school. There are many creative options available that encourage and educate students to walk and bike to school safely. These include:

1. Daily Promotional Activities

The SRTS program in Skagit Valley, Washington utilizes colored signs to indicate walking school bus routes.

Walking School Bus. The Walking School Bus Program is a great way for kids to safely walk to school under the supervision of adults. In many places that utilize this type of program, there are designated routes to school, which "pick-up" kids along the way just like a bus. The program can be used in a casual way, parents taking turns walking their children, or taken with a formal approach, using a timetable and a schedule of volunteers.

Many schools have made added themes or created special signage to make children excited about the walking school bus. In the New England area, the walking school bus is referred to as the "crocodile". Some schools have color coded routes and signage to make it easier for students to remember which route they should be on. Figure 4 shows an example of a Walking School Bus Route Map, where each route is a mile or less. Figure 5 is an example of a flyer promoting the walking school bus program. Other examples of flyers that can be customized for various events can be found at: http://www.walktoschool.org/resources/flyers.cfm.

The Canadian organization, Active and Safe Routes to School, has created an excellent checklist to start the process of developing a Walking School Bus program which can be viewed in Appendix A.

Bicycle Trains. Similar to the walking school bus idea, the bicycle train is a program that encourages bicycling to school by providing adult supervision and the establishment of fixed routes that "pick-up" children along the way to school. The bicycle train requires much more than the typical walking school bus program, which are discussed below:

1. Children should have a class regarding rules of the road and basic bicycle handling skills.
2. More adult supervision is required, typically one adult for every three to six children.
3. All riders must wear bicycle helmets.
4. This program is better suited for older elementary children.

Mileage Club/Frequent Walker Punch Cards. Creating Mileage Clubs and contests encourage children to bike or walk to school by rewarding them for reaching certain mileage goals. For this program, students track the amount of miles they walk or bicycle. These contests can be competitive on an individual basis, between classrooms, or among schools in the district. Issues for this type of program tend to arise when there is a portion of students that live in a rural setting who do not have access to sidewalks or trails. For these children, incentives can be modified to encourage children to walk

Figure 4: Example of Walking School Bus Routes

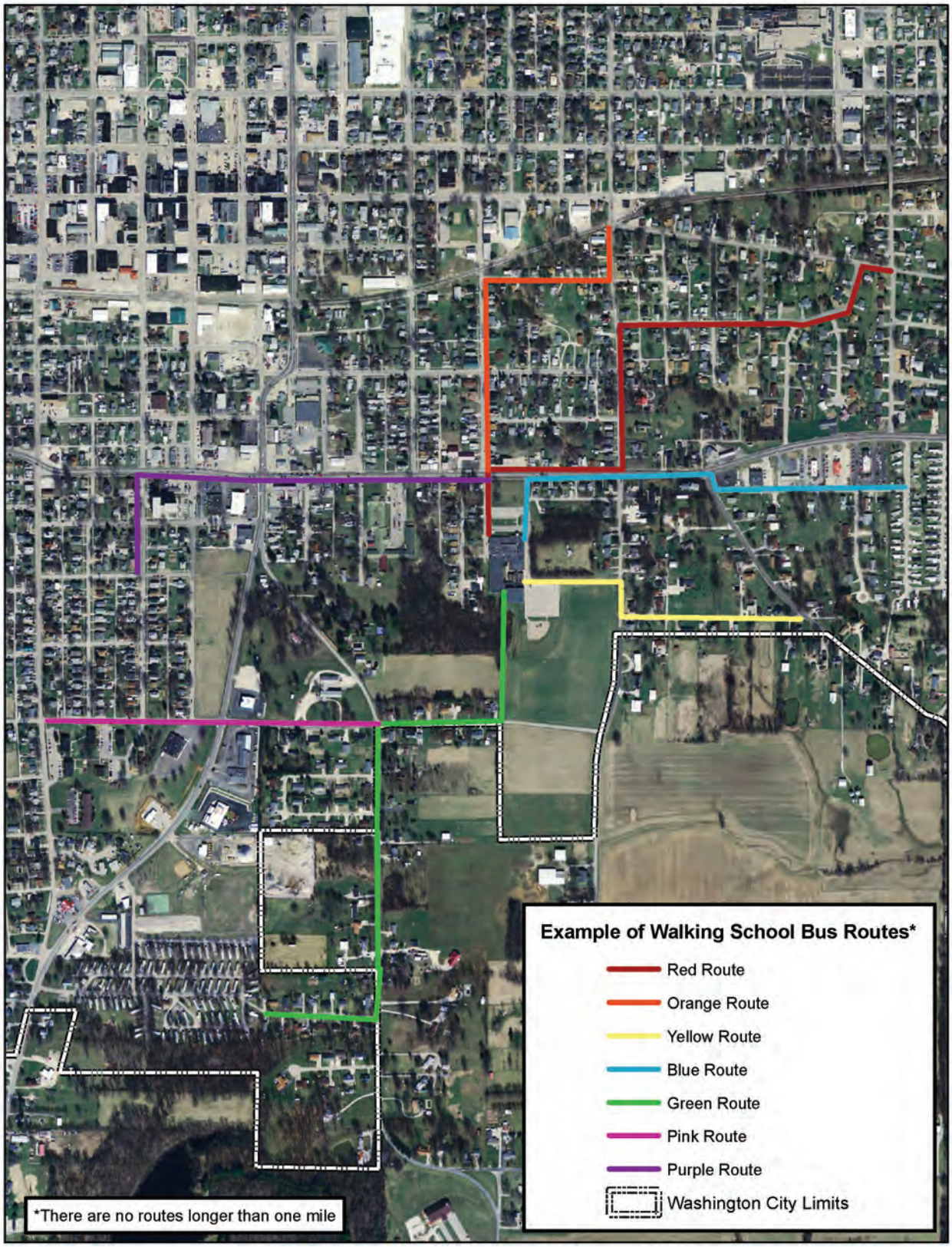


Figure 5: Example of a Walking School Bus Flyer

TRANSFORM
WORLD-CLASS PUBLIC TRANSPORTATION. WALKABLE COMMUNITIES.

Safe Routes Schools
Alameda County

ACTIA
ALAMEDA COUNTY TRANSPORTATION IMPROVEMENT AUTHORITY

Funded in part with a major grant from Measure B -- Alameda County's half cent transportation sales tax, administered by ACTIA

Safe Routes to Schools Walking School Bus

A **Walking School Bus** is a group of families living in the same neighborhood, who form a walking group to take children in their area to and/or from school along a set route. The availability of the walking school bus depends entirely on the availability of the parents and what's most convenient for everyone. Although some parents decide to make a set schedule, others prefer it to be less formal.

What are the benefits to joining a Walking School Bus?

- Improves safety-children are in walking groups, accompanied by an adult when walking to school.
- Saves parents' money by not using their vehicle.
- Saves parents' time when they aren't "driving" the bus.
- Reduces traffic congestion around the school and adjoining roads.
- IT'S FUN!!

Safe Routes to Schools Alameda County Partnership Program

Transform
436 14th Street, Suite 600
Oakland, CA 94612

Phone: 510-740-3150
Fax: 510-740-3131
E-mail: sr2s@transformca.org

Example of a punch card from the Frequent Walker Program Started at a school located in Elmhurst, Illinois.

Example of a bicycle rodeo road course done in Rifle, Colorado.

and bike near home or on the weekends, when parents can take their children to local trails or neighborhoods with sidewalks. A sample of a Mileage Club punch card can be seen above. Websites like "PE Central" can also help program administors keep track of participants mileage[1].

Lunch Walkers Club. The Lunch Walkers Club was created at a Massachusetts school by a few teachers who enjoyed using a portion of their lunch time for walking. Walks typically consisted of brief 20 minute walks in the surrounding neighborhood or, on rainy days, in the schools' gymnasium.

Currently, Lena Dunn Elementary has developed a similar program that allows students to walk supervised once a week around the school's track. Upon completion of a mile, students receive a plastic foot charm that they can add to their backpack.

Polar Bear Club. This is very similar to the other walking clubs; however, this encourages kids to get bundled up and active in the winter time.

2. Non-Daily Promotional Activities

Bicycle Rodeos[2]. Bicycle Rodeos are safety clinics that feature a lecture, a road course (to apply road etiquette and safety skills taught in the lecture), and bike safety inspections. Some schools in the past have also allowed booths to be set up by local bike shops and held contests for best looking bike and best decorated helmet. Rodeos are typically held on a Saturday in the spring, at the beginning of bicycle season.

The road course tends to be the most popular attraction at the bicycle rodeo. The course is normally laid out with chalk on a large parking lot where streets, intersections, crosswalks and stop signs are simulated[3]. Many recommend having local Police officers (especially Police Bicycle Patrols) set up the course due to their extensive experience with bicycle accidents.

Informational Campaign. Develop and distribute educational materials, not only for students but for parents and drivers in the community. Information can be dispersed through the media, informational flyers, and back-to-school packets and may include information regarding school travel options, safety skills, school access maps that highlight safe routes, and driver awareness information.

Walkin' and Wheelin' Week. This is a week-long celebration which raises awareness along roads adjacent to the school and helps to energize students before arriving in the classroom.

Walk and Bike to School Day/Month. Schools can schedule walk to school days where mechanisms are set in place to make walking and biking easier for students. Some communities do this on a weekly basis (Walk to school Wednesdays) or monthly basis. Typically flyers are distributed to promote these days. An example of a flyer can be found in Figure 6.

1 Keeping track of mileage. PE Central. http://www.peclogit.org/logit.asp. Last accessed on 02/05/11.
2 Bicycle Rodeos.
www.bicyclinglife.com/SafetySkills/BicycleRodeo htm

3 An Organizer's Guide to Bicycle Rodeos.
http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf

Figure 6: Example of a Walking to School Month Flyer

International Walk to School Month

Is taking place across the United States and around the world!
INSERT DATE OF YOUR EVENT HERE

Walk, bike, blade, scooter, skip or hop to school…
but don't drive!

Our school is participating in this exciting event and we hope that all families will do their best to WALK TO SCHOOL

☆ ☆ ☆

Help promote safer streets, healthier students, stronger communities, and a cleaner environment.

☆ ☆ ☆ ☆ ☆

Students, Parents and Teachers needed now to help us organize our Walk to School event.
Contact _____.

☆ ☆ ☆

International Walk to School Month is part of Green Communities Canada's Active & Safe Routes to School and The National Center for Safe Routes to School Organization
Check out the International Web site at www.iwalktoschool.org

Go the Distance Day. This is a great way to promote the Washington Greenway Plan. As more sections are completed and connected, a fundraising event can be held that will help promote physical activity and the reduction of childhood obesity. Similar to other walk-a-thons, contributors can earn a chance to win prizes based on the number of miles they complete.

3. Classroom Activities

Teachers may consider adding classroom activities that encourage children to participate in walking and biking activities. The National Center for Safe Routes to School Organization has identified different classroom activities that may be appropriate based on the class subject. The following is a combined example list of classroom activities mentioned on the National Center's website[4] and items that were discussed briefly during a meeting with local education officials.

Math. Students can calculate speeds and distances, perform statistical analysis on the number of walkers, frequency of walkers based on demographics, etc.

Geography. Survey and create maps of walking routes to school.

Biology. Identify plant and animal species, explain the process and benefits of the constructed wetlands, inventory indigenous species along different routes in the city.

Health. Study the benefits of increased activity levels.

4. Educating Drivers

Improving the environment for students to walk goes beyond educating our children on the rules of the road, improving crosswalks and constructing new pathways. Educating drivers is also an essential element in creating a safer environment for our children. During a study completed by the National Safe Kids campaign in 2000, the study observed driver habits around school zones in 27 different cities for 30 minutes before and after school. In this time frame, 65 percent of drivers exceeded the posted speed limit. Of the 65 percent of speeders, 23 percent of these drivers were traveling at least 10 mph above the speed limit and 33 percent were traveling 30 mph or more beyond the limit. Another study performed by the National Safe Kids campaign looked at driver behavior at intersections in school zones and residential neighborhoods. The study revealed that 45 percent of drivers failed to completely stop at the intersection, ignoring the stop sign. Seven percent of these drivers did not make an attempt to slow down for the sign. Finally, the campaign discovered that 30 percent of drivers stopped within or beyond the boundaries of crosswalks in school zones which in turn blocked the pedestrian pathway.

Learning from the lessons the National Safe Kids study provided, many SRTS programs started in the United States have found encouraging results from alerting drivers to areas where children would be potentially present and school zones. This has been done through traditional signage found in the Manual on Uniform Traffic Control Devices (MUTCD), non-MUTCD signage (which you may not be able to place along roadways, check with local officials), or through enforcement activities which include the use of speed trailers that display the drivers speed while traveling through school zones. Educational and guide signs not found in the Manual on Uniform Traffic Control Devices can be installed on private property. These signs can be much more decorative than traditional signs. Some communities have gone as far as hanging banners or signs across streets, which may stand out amongst standard signage.

Signs posted should alert drivers to the possibility of students present, yield to pedestrian and bicyclists in school zones, prevent drivers from blocking pedestrian crosswalks and obey speed limits in school zones. Figure 7 contains examples of signage that inform drivers of the possibility of children present.

Some SRTS programs have been more progressive and have begun driver education campaigns through the use of the media. Education campaigns through the media have been done in the form of radio announcements, newspaper articles or commercials.

5. Educate Residents Living Adjacent to the Trail

Many residents are fearful of the perceived negative effects a trail system will have on their property value and their own safety. Dispelling misinformation prior to the construction of a trail section may help the process of obtaining right-of-way easier. An informational campaign such as this can be done through mailings, media, luncheons, and table visits.

6. GET PARENTS INVOLVED!!

Many parents are fearful of all the things that could potentially go wrong when their child bikes or walks to

4 The National Center for Safe Routes to School. http://www.walktoschool.org/eventideas/classroom.cfm. Last accessed on 02/04/11.

Figure 7: Example of Signage Used To Alert Drivers to the Presence of Children

Typical MUTCD Signage

Non -MUTCD Signage

school. Many of these fears can be calmed when they know a responsible adult can accompany their children, however, there are other things that a parent can do to understand exactly what their children may encounter on their walk or bike ride to school. Appendix A includes a Walkability and Bikeability Checklist created by the National Center for Safe Routes to School[5]. Encourage parents to take the checklist with them while they do a test run of their children's walk/ride to school. On the page following the checklist, parents will find a comprehensive list of things they can do to allevieate or eliminate concerns with each situation they may encounter.

B. TYPICAL COMMENTS AND QUESTIONS RECEIVED WHEN SRTS PROGRAMS ARE IMPLEMENTED

1. But what can we do for children who live too far away from school to walk?

Although these students clearly cannot walk to school, there are other options available that can allow students to participate in some walking activities pre- or post-school hours.

Many bus routes pick students up directly in front of their homes. For those students who live in rural subdivisions, students can be encouraged to walk to a single bus stop within the neighborhood. Although these neighborhoods tend to lack sidewalks, walking with a parent down the block to meet other students at a single bus stop still allows them an opportunity to participate in the program, even if it is a short walk.

When participating in the International Walk to School Day program, some school districts haven chosen to drop bussed in students at a location approximately 1/4 mile from the school along an already designated walking school bus route. Students are then greeted by adults who volunteer to walk with the children the remaining way to school. This allows students, who otherwise would not be allowed to participate, a chance to walk to school supervised with their fellow classmates.

Finally, students can participate in the Lunch Walkers Club as outlined in the Daily Promotional Activities section of this chapter.

5 National Center for Safe Routes To School Bikeability and Walkability Checklists. http://www.walktoschool.org/eventideas/checklists.cfm. Last accessed on 02/05/11.

2. Walking takes a longer time than the bus.

It takes an average walking school bus route 15-20 minutes to travel a little over a quarter mile. It takes a school bus the same amount of time to cover the same area, due to the number of stops.

3. Encouraging children to walk to school is a liability to the school and the city *.

Regardless of whether students bike, walk, take the bus or are driven to school in a personal vehicle there are risks. In general, a school can only be held "liable" for negligent actions or omissions. In other words, an injured person must show the school owed a legal duty of care to that person, that the school breached that duty and that the breach was the "proximate cause" of damages or injury[6].

As explained in the Liability Tip Sheet provided by the National Center for Safe Routes to School:

A school's duty of care to students and resulting legal liability when students are injured is very situational and can only be assessed in the context of the specific program or activity and with knowledge of the specific facts giving rise to an injury. Relevant factors are likely to include:

- *the degree to which the school controls or directs the activity that results in injury,*
- *the extent to which the school's actions conformed to applicable rules, regulations, policies, or procedures, and*
- *the extent to which the school knew or should have known of a particular hazard and failed to correct or warn against it.*

Because the school is encouraging children to be active and walk and bike to school, reminding parents that it is not the schools responsiblility for supervising children who walk or bike to schools, schools are not ordinarily held liable for injuries sustained by children while walking or biking to school. To futher avoid any risk of negligence, the school should always excercise "reasonable care" clearly following procedures recommended by the National Center for SRTS as well as any rules, policies,

6 National Center of Safe Routes to School. Liability Tip Sheet. http://www.saferoutesinfo.org/resources/collateral/liabilitytipsheet.pdf

* This section is a general discussion of liability issues and should be used as an informative discussion only. All final decisions regarding liability issues should be discussed with the school and city's legal staff.

or protocols established by the school district for school-sponsored activities occuring off school property.

Other steps outlined in the Liability Tip Sheet include:

1. *Working with your school district's administrative and legal staff to understand relevant liability issues and to develop policies.*
2. *Be aware of local laws, regulations and school policies.*
3. *Take steps to fix problems. This can include unsafe pavement, crossings, drop off points, etc. Warn parents of any known hazards.*
4. *Document efforts to identify and fix potential problems.*
5. *Consider the use of Waivers.*
6. *Inform and involve parents.*
7. *Review insurance coverage to ensure SRTS activities are covered.*
8. *Provide training to any volunteers or workers that participate in SRTS related activities.*

4. I will not let my child walk by his/her self. They are too young, there are too... many child abductors, bad drivers, etc.

There are many tools and resources available to families, schools, and communities to reduce the chances a child will encounter these harmful situations. One of the first things a community can do to shed light on these issues is to hold a press conference with local community leaders. Programs such as the walking school bus which provides children with escorts to the school will reduce the number of these safety concerns.

5. This sounds expensive.

Developing a trail system is expensive but organizing a Walk to School Event can be for free. For those schools who want to provide prizes or snacks, some local businesses and organizations may be willing to sponsor your event.

As the Safe Routes to School initiative has gained popularity over the years, goverment officials have recongnized the increasing need for funding of sidewalks and trails. The number of funding sources has increased in the last decade but so has the need. Most funding recepients are chosen through a competitive process; however, communities that can demonstrate need, have a comprehensive SRTS plan in place, and have implemented strong walking/biking educational programs are more likely to receive funding. As funding becomes available, segments of sidewalk and trails are constructed.

6. Building a sidewalk across my front yard will... decrease my property value....cause increased crime... lose property in front of my home...lose established trees...require snow removal.

Sidewalks enhance the appearance of individual properties, neighborhoods, and the entire community. It has been demonstrated in many places of the country that the introduction of trails and sidewalks into a neighborhood increases the desirability of the neighborhood to purchasers, increasing the property value. Sidewalks seldomly affect property values in a negative way unless they are in poor condition.

Walkers tend to be the ears and eyes of the neighborhood. In general, most walkers tend to be school-aged children or people who use the walkways to remain physically fit. Statistically, perpetrators of home burglaries and assaults by strangers in a home are done by people who drove to the destination, not walked. In many studies done throughout the US, there is very little evidence to show that the presence of a sidewalk will increase the frequency of crime.

In most cases, the city owns an amount of public right-of-way property adjacent to existing roads and in front/side of your home. This would be the city's most likely choice of location for building walkways. In rare situations the city can choose to acquire right-of-way or easements to make room for new walkways, however, most cities avoid the process due to cost and time constraints.

Sidewalks do not have to be constructed in a linear fashion. This allows, at the discretion of city and state policies and engineering constraints, the development of new sidewalks to be built around established trees.

Yes, the addition of a new sidewalk requires snow removal. If you are unable to remove snow due to disabilities, age, etc there are other options available. These options include paying a teenager or neighbor, asking the person who clears your driveway, contact local organizations and churches for volunteers.

CHAPTER 4 TRAIL DESIGN

A. DESIGNING THE TRAIL SYSTEM

Following the evaluation of existing conditions, alternative routes were developed to ensure that all trip generators (schools, parks, and commercial areas) were connected to the trail system. Many questions were asked to help answer which alternative route would work the best. These questions include:

- **What is the topography in the area?** Or in other words, is the area hilly or flat? What's the vegetation like? Does sidewalk already exist here or is this a grassy area?
- **Is there enough available right-of-way?** Will we need to purchase right-of-way or can we get an easement to construct the pathway?
- **If there is no right-of-way available, will the current width of the roadway support a bike lane?**
- **Will the path cross the street at the safest location?** Will the location provide the longest amount of sight distance for drivers and pedestrian/bicyclists? Will traffic calming mechanisms (pedestrian islands, bump-outs, caution signs, flashing lights, raised crosswalks) need to be in place to slow traffic?
- **Will the location of the trail conflict with drop off/pick-up locations at the school?** Will this route cross many high-traffic entrances and exits to commercial or industrial areas?

Through this process, 24 segments of trail were designed, consisting of approximately 12.3 miles of trails and 5.8 miles of bike lanes. If the trail system was built today, in 2011, the total cost of the project would be approximately $30.2 million dollars. Table 2 shows a summary of costs for the trail system. A detailed key map of the entire project can be found in Exhibit 1 in Appendix B.

B. THINGS TO KNOW

What's the difference between a sidewalk, a trail and a bike lane?

Sidewalks are typically constructed out of concrete alongside roadways and are four to six feet wide. Sidewalks are really designed solely for pedestrian traffic. Bicyclists and roller-bladers tend to avoid using sidewalks

Example of a sidewalk (top), trail (middle), and bike lane (bottom)

Trail System Map

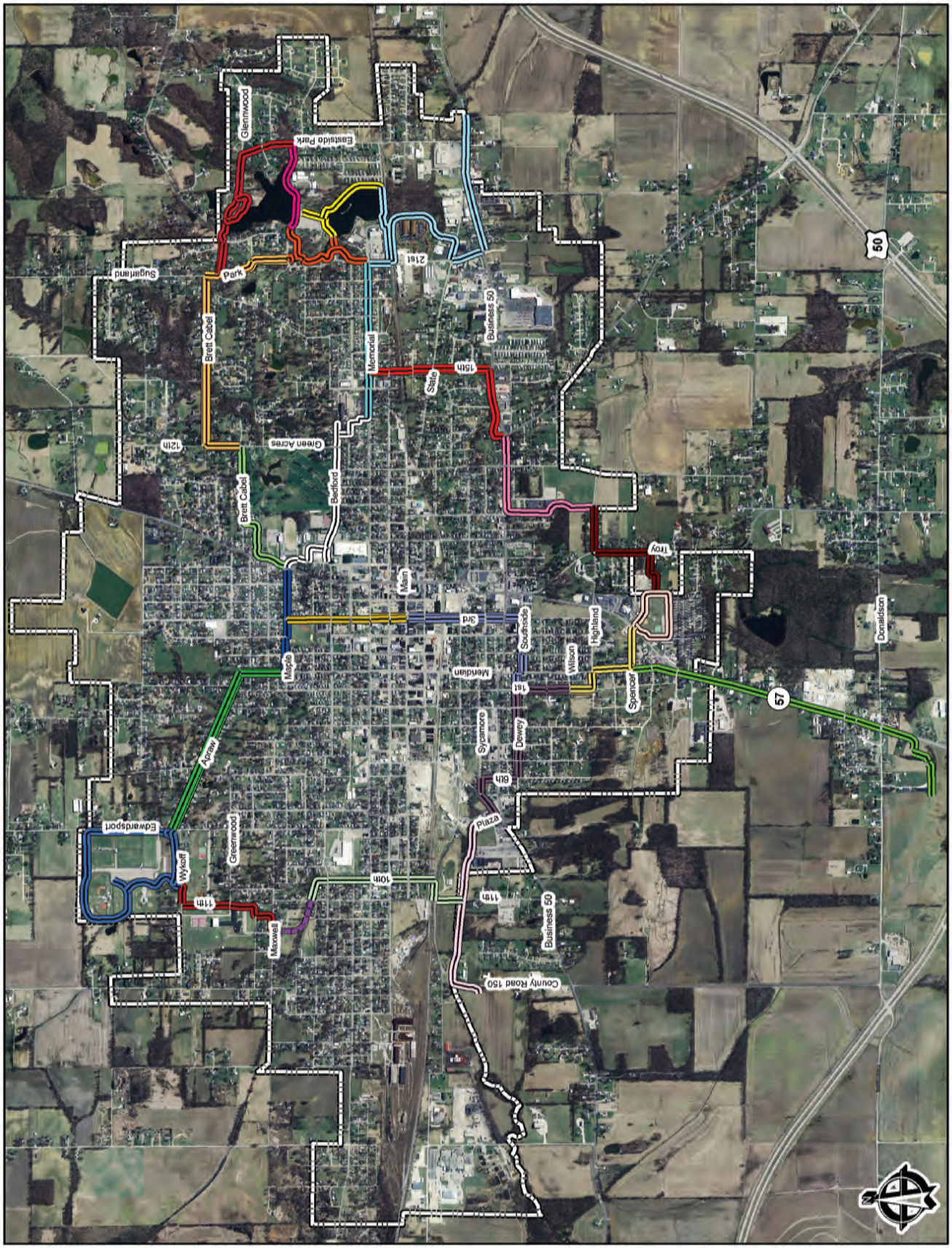


Table 2: Summary of the Trail System's Cost

SUMMARY OPINION OF PROBABLE COST CITY OF WASHINGTON, INDIANA March 17, 2011		
Section No.	**Trail Description**	**Cost**
1	Gwaltney Park	$ 1,620,594
2	Apraw Connector--Gwaltney Park to Maple Street	$ 1,795,573
3	Maple Street Connector--Meridian Street to North Elementary School	$ 550,668
4	Bedford Connector--North Elementary School to Daviess Community Hospital	$ 1,337,481
5	Brett Cable Road Connector--North Elementary to Green Acres Road	$ 875,520
6	Brett Cable Road Connector--Country Club to Eastside Park	$ 1,933,278
7	Bedford / Glennwood Connector--21st Street to Eastside Park North Campus	$ 2,053,541
8	Eastside Park Connector--Eastside Park Road to South Campus Community Center	$ 428,649
9	Eastside Park / South Campus Improvements--Memorial Drive to Community Center	$ 1,018,821
10	Eastside Park / South Campus Improvements--Lake Shore Addition	$ 942,241
11	Enterprise Zone Connector--Eastside Park to I-69 Corridor	$ 1,499,746
12	Memorial Drive Connector--Daviess Community Hospital to Eastside Park (South Campus)	$ 1,259,698
13	15th Street Connector--Memorial Avenue to Business 50	$ 1,656,435
14	Helen Griffith Elementary School Connector--Business 50 to Highland Avenue	$ 1,152,138
15	Highland / Troy Connector--Helen Griffith Elementary School to South Park	$ 906,050
16	South Park	$ 1,200,615
17	Meridian Street / First Street Connector--South Park to Wilson Street	$ 970,188
18	Walmart Connector--Spencer Street to Walmart	$ 2,403,043
19	First / Dewey / Sixth Connector--Wilson Street to US 50 Commercial Center	$ 1,546,005
20	South Third Street Connector--Main Street to Dewey Avenue	$ 1,445,224
21	North Third Street Connector--Main Street to Maple Street	$ 793,124
22	Wetland Connector--Business 50 Commercial Center to Wetland	$ 708,956
23	Tenth Street Connector--Westwood Crossing to Wetland Trail	$ 1,380,051
24	Lena Dunn Elementary School--Gwaltney Park to Westwood Crossing	$ 679,822
	TOTAL	**$ 30,157,462**

because they are not wide enough for pedestians and bicyclists to share. Also, concrete sidewalks have joints (generally, every five feet) that can cause slightly uneven surfaces.

Trails, when discussed in this document, are multi-use paths that are generally eight to ten feet wide and are constructed out of asphalt or concrete. Asphalt is the prefered material for trails because it provides a softer running and walking surface. Roller-bladers, cyclists and handicap users also tend to prefer asphalt surfaces because asphalt provides a smooth, joint-free surface, unlike concrete surfaces. Concrete may be used in more urbanized settings due to its durability.

Bike Lanes are a portion of the roadway which has been designated for non-motorized uses. These lanes are normally denoted by painted lines, barriers, bollards or boulevards and are ideally five feet wide depending on the existing characteristics of the roadway.

Why was the trail system broken into so many segments? How is the length of a segment determined?

A trail system of this size is difficult to build all at one time. The trail system is broken into multiple segments in an effort to make funding of the construction of the trails easier.

Currently, funding that is released strictly for the purpose to construct trails and paint bike lanes comes in increments ranging from just a few thousand dollars to around a million dollars. As you glance through the segments, you will notice that the segments range in cost from $300 thousand to $1.9 million. Segments over a million dollars may have the ability to be paired up with other needed roadway improvements. Roadway projects, in general, have the ability to earn higher amounts of funding thanks to Federal grant programs such as the Transportation Enhancement Activities Program (TE grant) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ).

Most grants require that trail segments contain logical end points (ex. point A is a school and point B is a park) or the trail segment must demonstrate that it is one of multiple segments necessary to reach a desired end point. As you examine each segment, you will notice that each segment meets one of these requirements.

Do the segment numbers imply the order that the trail system will be constructed?

Segment numbers do not imply which segment will be built first. The order in which the segments will be constructed will most likely be influenced by available funding.

What does the cost estimate mean by 2011 dollars?

All cost estimates are based on the amount of money it would cost to construct the project on April 1, 2011, the date the plan was published. Construction prices change from year to year so these estimates are just that, an estimate.

Why is there a missing section of the trail south of Lena Dunn Elementary?

During the planning phase of the Safe Routes to School Plan, the city chose to incorporate part of the future trail system into a new housing development, Westwood Crossings. Since the housing development and this portion of the trail system will be near completion at the time the plan will be published, there was no need to incorporate this segment into the plan.

Section 1: Gwaltney Park Summary

Cost: $ 1,620,594 (2011 dollars)

Length: ~ 1.27 miles (~ 6,708 linear feet) of trails

C. TRAIL SECTIONS

1. Gwaltney Park

a. Setting Description

Gwaltney Sports Complex is located in the northwest corner of Washington, directly north of Longfellow Park and Lena Dunn Elementary School. The park is one of the most popular places for recreation in the city. Besides the multiple tennis courts, soccer, baseball and softball fields located on the park grounds, the park offers many amenities that would make Gwaltney Park an excellent trailhead. These amenities include ample parking, three shelters, a playground and restroom facilities.

Signage for Gwaltney Sports Complex.

b. Project Description

The proposed section of the trail system will be constructed entirely on the grounds of the sports complex which is

Section 1: Gwaltney Park

currently owned by the Washington Community School District. This section is envisioned to be constructed as an asphalt trail. The trail is designed to encircle the entire park, allowing users to use this section to walk/bike a longer distance without traveling far from amenities and their vehicle.

The length of this section is approximately 1.27 miles long. An estimate of costs associated with this project is located in Table 3. A detailed engineer's rendering of this section can be found in Exhibit 2 in Appendix B.

c. Additional Improvements

Portions of the park flood during heavy rain events causing the potential need to provide better stormwater drainage. Additional costs ($30,000) were added into the final estimate to allow such improvements.

Crosswalks crossing over Wykoff Lane and Edwardsport Road should be striped to provide safer crossing areas. Adding signs to alert drivers of the potential presence of pedestrians and cyclists would also be beneficial at these two locations. The park's two exits/entrances would also benefit from striped or raised crosswalks along with the placement of signage indicating where the trail crosses the roadway (as shown to the right).

d. Potential Challenges

Located in the southwest corner of the park lies an old cemetery. The trail was designed to avoid this section of Gwaltney Park, however it is important to note that this area should not be disturbed during the construction phase of this project.

Table 3: Section 1 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 1 - GWALTNEY PARK MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	22,000.00	22,000
2	Mobilization and Demobilization	LS	1	55,000.00	55,000
3	Clearing Right-of-Way/Site Clearing	LS	1	20,000.00	20,000
4	Special Subgrade Treatment	SYS	10,199	4.00	40,796
5	Excavation, Common	CYS	15,443	10.00	154,430
6	Finish Grading	SFT	332,871	0.15	49,931
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	2,000.00	2,000
9	Compacted Aggregate for Base No. 53	TON	3,246	25.00	81,150
10	HMA Surface, Type A	TON	601	95.00	57,095
11	HMA Intermediate, Type A	TON	1,002	85.00	85,170
12	Sidewalk, Concrete 5" (colored)	SYS	989	60.00	59,340
13	Sidewalk, Concrete, Plain Broom Finish	SYS	828	40.00	33,120
14	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
15	Fertilizer	TON	3	950.00	2,945
16	Seed Mixture	LBS	950	3.00	2,850
17	Mulching Material	TON	8	400.00	3,040
18	Sodding, Nursery	SYS	18,492	3.50	64,722
19	Topsoil	CYS	335	40.00	13,400
20	Mulch, Hardwood Shredded Bark	CYS	111	65.00	7,215
21	Plant, Grass	SFT	9,054	20.00	181,080
22	Trees	EA	97	400.00	38,800
23	Storm Sewer (allowance)	EA	1	30,000.00	30,000
24	Maintenance of Traffic	LS	1	2,500.00	2,500
25	Signage	EA	24	350.00	8,400
26	Signs, Project	EA	3	2,500.00	7,500
27	Bench, Metal	EA	8	1,500.00	12,000
28	Line, Paint, Solid, Red, 4"	LFT	6,663	1.25	8,329
29	Bicycle Racks	EA	6	250.00	1,500
30	HMA Patching	TON	20	200.00	4,000
31	Concrete Drive Approach	SYS	101	80.00	8,080
32	Play Surface	SYS	140	50.00	7,000
33	Curb & Gutter	LFT	30	12.00	360
34	Walkway Edging	LFT	13,169	8.00	105,352
35	Pavement Markings	LFT	6,663	1.50	9,995
36	Symbols/Markings	EA	14	150.00	2,100
				Subtotal	1,183,299
				Design Engineering	118,330
				Construction Management	177,495
				Survey	23,140
				Subtotal	1,502,264
				Contingency (10%)	118,330
				Total	**$1,620,594**

Section 2: Apraw Road Connector Summary

Cost: $ 1,795,573 (2011 dollars)

Length: ~ 1.38 miles (~7,279 linear feet) of bike lanes

2. Apraw Road Connector - Gwaltney Park to Maple Street

a. Setting Description

Apraw Road, Meridian Road and Maple Street are used as the main route to link SR 57 to Gwaltney Sports Complex, Longfellow Park and Lena Dunn Elementary. Apraw Road currently lacks sidewalks, unlike Meridian Road and Maple Street. The lack of sidewalks on this street and the significance of this route have led to residents walking on this long stretch of roadway. Since the road width of Apraw is only 24 feet wide, there would be an insufficient amount of roadway available for two cars and a pedestrian to share.

Apraw Road.

b. Project Description

This section of the trail system will consist of the widening of Apraw Road to provide enough room to accommodate

Section 2: Apraw Road Connector - Gwaltney Park to Maple Street

Meridian Street.

two one-way pair of bike lanes, one on each side of the street. As Apraw Road transitions southward into Meridian Road, the bike lanes will continue along both sides of Meridian Road.

There will be approximately 1.38 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 4. A detailed engineer's rendering of this section can be found in Exhibit 3 in Appendix B.

c. Additional Improvements

Although there is a three-way stop at the corner of Apraw Road and Edwardsport Road, crosswalks should be clearly defined by striping the area, alerting drivers of potential trail users.

d. Potential Challenges

Widening of Apraw Road and the addition of stormwater drainage improvements has been identified as a need in the Washington Comprehensive Plan (Adopted in 2009). Unfortunately, Apraw Road has very little additional right-of-way available for future widening efforts. This project may require the granting of multiple easements.

Table 4: Section 2 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 2 - APRAW CONNECTOR MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	26,000.00	26,000
2	Mobilization and Demobilization	LS	1	65,000.00	65,000
3	Clearing Right-of-Way/Site Clearing	LS	1	60,000.00	60,000
4	Special Subgrade Treatment	SYS	8199	4.00	32,796
5	Excavation, Common	CYS	7486	10.00	74,860
6	Finish Grading	SFT	40,350	0.15	6,053
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	37,000.00	37,000
9	Compacted Aggregate for Base No. 53	TON	4296	25.00	107,400
10	HMA Surface, Type A	TON	676	95.00	64,220
11	HMA Intermediate, Type A	TON	2029	85.00	172,465
12	Sidewalk, Concrete, Plain Broom Finish	SYS	1093	40.00	43,720
13	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
14	Fertilizer	TON	0.4	950.00	380
15	Seed Mixture	LBS	250	3.00	750
16	Mulching Material	TON	2	400.00	800
17	Sodding, Nursery	SYS	2500	3.50	8,750
18	Trees	EA	100	400.00	40,000
19	Storm Sewer	LFT	3700	30.00	111,000
20	Storm Sewer Inlets, Rework	EA	30	1,500.00	45,000
21	Concrete Drive Approach	SYS	1957	80.00	156,560
22	Curb & Gutter	LFT	7378	12.00	88,536
23	Utility Relocation	LS	1	100,000.00	100,000
24	Maintenance of Traffic	LS	1	15,000.00	15,000
25	Signage (general sheet)	EA	50	350.00	17,500
26	Signs, Project	EA	1	2,500.00	2,500
27	Bicycle Lanes	LFT	6475	5.00	32,375
28	Lane Markings	EA	52	75.00	3,900
29	Pavement Markings	LFT	640	1.50	960
30	Symbols/Markings	EA	12	300.00	3,600
				Subtotal	1,319,225
				Design Engineering	131,922
				Construction Management	197,884
				Survey	14,620
				Subtotal	1,663,651
				Contingency (10%)	131,922
				Total	**$1,795,573**

Section 3: Maple Street Connector Summary

Cost: $ 550,668 (2011 dollars)

Length: ~ 0.31 miles (~1,650 linear feet) of trails

3. Maple Street Connector - Meridian Street to North Elementary School

a. Setting Description

Maple Street is a popular route for students to take when walking/biking to North Elementary School. Maple Street, along with Meridian Road and Apraw Road, also serves as the primary route that links SR 57 to Lena Dunn Elementary, Longfellow Park and Gwaltney Park. The Maple Street Connector also passes directly north of the YMCA baseball field.

Sidewalks exist on the north side of Maple Street but they are in a deteriorated state. In the fall of 2010, new sidewalk ramps were constructed. With the help of a Safe Routes to School Grant, sidewalks will be replaced on the north side of Maple Street in the spring of 2011. These sidewalks will be reconstructed to its current width of four feet due to the limited available right-of-way.

b. Project Description

Due to the limited available right-of-way available on the north side of Maple Street and the four foot wide sidewalks, the trail section proposed here will not overlap with the new sidewalks constructed with SRTS dollars. Instead, the parking lane will be removed on the south side of Maple Street, between 5th Street and SR 57. The trail and street curb will be built at this location, shortening the roadway width but providing the needed right-of-way for the trail. The trail will remain on the south side of Maple Street until 2nd Street, where it will transition back to the north side of the street. The transition of the trail from the south side to the north side of Maple Street was necessary due to the limited right-of-way on the south side of the street between Meridian Road and 2nd Street.

There will be approximately 0.31 miles of trail constructed

Section 3: Maple Street Connector - Meridian Street to North Elementary School

Deteriorated Sidewalks at the corner of Meridian Road and Maple Street.

in this section. An estimate of costs associated with this project is located in Table 5. A detailed engineer's rendering of this section can be found in Exhibit 3 in Appendix B.

c. Additional Improvements

Crosswalks should be restriped along the intersection of SR 57 and Maple Street. Placing pedestrian/cyclist crossing signs with flashing yellow lights should also be considered at this intersection. If any future roadway improvements are to be done on SR 57 around the North Elementary School area, a pedestrian island should be introduced as a traffic calming measure at the intersection of Maple and SR 57. Any addition of signage or other changes to SR 57 must be done so with the permission of the Indiana Department of Transportation (INDOT).

d. Potential Challenges

Maple Street's roadway width decreases as the street progresses westward, from 33 feet to 19 feet wide, eliminating the ability to introduce bike lanes into this section. Available right-of-way width is also limited throughout this section which may lead to the need to obtain multiple easements.

Table 5: Section 3 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 3 - MAPLE STREET CONNECTOR MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	8,200.00	8,200
2	Mobilization and Demobilization	LS	1	21,000.00	21,000
3	Clearing Right-of-Way/Site Clearing	LS	1	30,500.00	30,500
4	Special Subgrade Treatment	SYS	1693	4.00	6,772
5	Excavation, Common	CYS	1860	7.00	13,020
6	Finish Grading	SFT	20,302	0.15	3,045
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	7,700.00	7,700
9	Compacted Aggregate for Base No. 53	TON	1368	25.00	34,200
10	HMA Surface, Type A	TON	140	95.00	13,300
11	HMA Intermediate, Type A	TON	233	85.00	19,805
12	HMA Patching	TON	464	200.00	92,800
13	Sidewalk, Concrete, Plain Broom Finish	SYS	49	40.00	1,960
14	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
15	Fertilizer	TON	0.2	950.00	190
16	Seed Mixture	LBS	118	3.00	354
17	Mulching Material	TON	0.9	400.00	360
18	Sodding, Nursery	SYS	2255	3.50	7,893
19	Trees	EA	28	400.00	11,200
20	Storm Sewer	LFT	1500	30.00	45,000
21	Storm Sewer Inlets, Rework	EA	7	1,500.00	10,500
22	Concrete Drive Approach	SYS	108	80.00	8,640
23	Curb & Gutter	LFT	1708	12.00	20,496
24	Utility Relocation	LS	1	25,000.00	25,000
25	Maintenance of Traffic	LS	1	5,000.00	5,000
26	Signage (general sheet)	EA	20	350.00	7,000
27	Signs, Project	EA	1	2,500.00	2,500
28	Pavement Markings	LFT	1529	1.50	2,294
29	Symbols/Markings	EA	6	300.00	1,800
				Subtotal	402,628
				Design Engineering	40,263
				Construction Management	60,394
				Survey	7,120
				Subtotal	510,405
				Contingency (10%)	40,263
				Total	**$550,668**

Section 4: Bedford Connector Summary

Cost: $ 1,337,481 (2011 dollars)

Length: ~ 0.76 miles (~4,018 linear feet) of trails

4. Bedford Connector - North Elementary School to Daviess Community Hospital

a. Setting Description

The Bedford Connector links North Elementary School, WOW Park, Washington Junior/Senior High School, the Indiana National Guard Post, Washington Country Club and Daviess Community Hospital. Sidewalks exist along the east side of 6th Street from SR 57 to Bedford Road and on the west side of 6th Street from 57 to an area across from the south entrance to North Elementary School. Approaching WOW from the north, a large concrete staircase is present which then leads to

Existing sidewalk and steep staircase located between WOW from North Elementary.

a leveled sidewalk that wraps around to the southeast corner of WOW. The existing sidewalk continues on the north side of Bedford Road from the Washington Country Club until the north parking lot of Daviess Community Hospital. Sidewalks located on the north side of Bedford Road are only four-feet-wide. There are no existing sidewalks on the south side of Bedford Road. Although

Section 4: Bedford Connector - North Elementary School to Daviess Community Hospital

there are no existing sidewalks along 13th Street, there are existing sidewalks along Grand Avenue.

b. Project Description

This section of trail begins at the corner of 6th Street and SR 57, traveling southward on 6th Street on the west side of the street. The trail transitions to the east side of 6th Street south of the entryway into the football field located adjacent to North Elementary. The trail remains on the east side of 6th Street until the corner of Bedford Road and 6th Street. The trail then shifts to an easterly direction, traveling south of the Washington Country Club until it reaches the north parking lot for Daviess Community Hospital. Another leg of this trail section travels southward from the corner of 13th Street and Bedford Road, along the west side of 13th Street until it turns eastward on to Grand Avenue. From Grand Avenue, the trail travels along the length of the western boundary of the hospital's parking lot until it concludes at Walnut Street.

There will be approximately 0.76 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 6. A detailed engineer's rendering of this section can be found in Exhibit 4 in Appendix B.

Existing crosswalk striping at the intersection of Maple Street and SR 57.

c. Additional Improvements

Crosswalks should be restriped along the intersection of SR 57 and Maple Street. Placing pedestrian/cyclist crossing signs with flashing yellow lights should also be considered at this intersection. If any future roadway improvements are to be done on SR 57 around the North Elementary School area, a pedestrian island should be introduced as a traffic calming measure at the intersection of Maple Street and SR 57. Any addition of signage or other changes to SR 57 must be done so with the permission of the Indiana Department of Transportation (INDOT).

In addition to the Maple Street / SR 57 intersection, other locations where this section of trail crosses over busy roadways should be striped too. Trail crossing signs may provide some safety benefits in this area.

Pictorial of the putting green and golf cart path at the country club in relation to the existing sidewalk.

d. Potential Challenges

There are two foreseen challenges to the construction of this section. First, a golf cart path and a sign for the Washington Country Club may have to be relocated to provide enough room for the trail.

Secondly, the section of trail that follows the hospital's parking lot boundaries will be placed closely to an existing medical building and its adjacent storage buildings as well as Myers Flower and Bridal Shop. Multiple easements will need to be obtained to complete this section.

Table 6: Section 4 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 4 - BEDFORD CONNECTOR NORTH ELEMENTARY SCHOOL TO DAVIESS COMMUNITY HOSPITAL MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	18,000.00	18,000
2	Mobilization and Demobilization	LS	1	45,000.00	45,000
3	Clearing Right-of-Way/Site Clearing	LS	1	20,000.00	20,000
4	Special Subgrade Treatment	SYS	5064	4.00	20,256
5	Excavation, Common	CYS	7800	10.00	78,000
6	Finish Grading	SFT	83,862	0.15	12,579
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,145.00	15,145
9	Compacted Aggregate for Base No. 53	TON	2298	25.00	57,450
10	HMA Surface, Type A	TON	339	95.00	32,205
11	HMA Intermediate, Type A	TON	564	85.00	47,940
12	Sidewalk, Concrete 5" (colored/textured)	SYS	537	60.00	32,220
13	Sidewalk, Concrete, Plain Broom Finish	SYS	613	40.00	24,520
14	HMA Patching	TON	304	200.00	60,800
15	Walkway Edging	LFT	7075	8.00	56,600
16	Pavement Markings	LFT	609	1.50	914
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.77	950.00	732
19	Seed Mixture	LBS	240	3.00	720
20	Mulching Material	TON	0.96	400.00	384
21	Sodding, Nursery	SYS	4659	3.50	16,307
22	Topsoil	CYS	168	40.00	6,720
23	Mulch, Hardwood Shredded Bark	CYS	55	65.00	3,575
24	Plantings	SFT	4528	15.00	67,920
25	Trees	EA	71	400.00	28,400
26	Storm Sewer	LFT	3029	30.00	90,870
27	Storm Sewer Inlet, Rework	EA	11	1,500.00	16,500
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	20	350.00	7,000
30	Signs, Project	EA	3	2,500.00	7,500
31	Bench, Metal	EA	6	1,500.00	9,000
32	Line, Paint, Solid, Red, 4"	LFT	3029	1.25	3,786
33	Bicycle Racks	EA	12	250.00	3,000
34	Concrete Drive Approach	SYS	480	80.00	38,400
35	HMA widening	TON	51	150.00	7,650
36	Curb & Gutter	LFT	3283	12.00	39,396
37	Pavement Markings	LFT	609	1.50	914
38	Symbols/Markings	EA	12	300.00	3,600
39	Concrete Class A (Poured Walls/Stairs)	CYS	4	750.00	3,000
40	Railing (Stairs)	LFT	20	100.00	2,000
41	Walls (Modular)	SFT	1304	15.00	19,560
42	Wall Erection	SFT	1304	15.00	19,560
43	Structure Backfill, Modular Wall	CYS	193	30.00	5,790
44	Railing (retaining wall)	LFT	326	150.00	48,900
				Subtotal	979,912
				Design Engineering	97,991
				Construction Management	146,987
				Survey	14,600
				Subtotal	1,239,489
				Contingency (10%)	97,991
				Total	**$1,337,481**

Section 5: Brett Cable Connector - North Elementary to Green Acres Road Summary

Cost: $ 875,520 (2011 dollars)

Length: ~ 0.47 miles (~2,485 linear feet) of trails

5. Brett Cable Connector - North Elementary School to Green Acres Road

a. Setting Description

Section 5 provides a connection between North Elementary School to neighborhoods located north of the school. This section is also the first of two links that connect North Elementary to Eastside Park. In this proposed section, sidewalks only exist along SR 57 from the intersection of Maple Street to the end of the school boundary.

Brett Cable , looking east towards Green Acres Road.

b. Project Description

The trail will begin at the intersection of Maple Street and SR 57. The trail will follow the school boundary until it reaches just south of Brett Cable Court. The trail will then transition northward along Brett Cable Court until it turns towards an easterly direction along Brett Cable Road.

Section 5: Brett Cable Road Connector - North Elementary School to Green Acres Road

North Elementary School

This trail section will follow the north boundary of the Washington Country Club until it ends at the intersection of Brett Cable Road and Green Acres (also known as 12th Street).

There will be approximately 0.47 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 7. A detailed engineer's rendering of this section can be found in Exhibit 5 in Appendix B.

c. Additional Improvements

Crosswalks should be restriped along the intersection of SR 57 and Maple Street. Placing pedestrian/cyclist crossing signs with flashing yellow lights should also be considered at this intersection. If any future roadway improvements are to be done on SR 57 around the North Elementary School area, a pedestrian island should be introduced as a traffic calming measure at the intersection of Maple and SR 57. Any addition of signage or other changes to SR 57 must be done so with the permission of the Indiana Department of Transportation (INDOT).

d. Potential Challenges

The availability of adequate right-of-way west of Brett Cable Court could not be determined during the planning process. If it is determined that there is a lack of adequate right-of-way available, the city may need to seek an easement for this portion of the trail. Likewise, an easement may need to be granted for the section of trail along the north boundary of the Washington Country Club.

Table 7: Section 5 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 5 - BRETT CABLE ROAD CONNECTOR NORTH ELEMENTARY TO GREEN ACRES MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	12,000.00	12,000
2	Mobilization and Demobilization	LS	1	30,000.00	30,000
3	Clearing Right-of-Way/Site Clearing	LS	1	30,000.00	30,000
4	Special Subgrade Treatment	SYS	2850	4.00	11,400
5	Excavation, Common	CYS	3936	10.00	39,360
6	Finish Grading	SFT	73,197	0.15	10,980
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	13,000.00	13,000
9	Compacted Aggregate for Base No. 53	TON	1347	25.00	33,675
10	HMA Surface, Type A	TON	236	95.00	22,420
11	HMA Intermediate, Type A	TON	409	85.00	34,765
12	HMA Patching	TON	133	200.00	26,600
13	Sidewalk, Concrete 5" (colored/textured)	SYS	146	60.00	8,760
14	Sidewalk, Concrete, Plain Broom Finish	SYS	122	40.00	4,880
15	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
16	Fertilizer	TON	0.7	950.00	665
17	Seed Mixture	LBS	425	3.00	1,275
18	Mulching Material	TON	3.4	400.00	1,360
19	Sodding, Nursery	SYS	8133	3.50	28,466
20	Topsoil	CYS	185	40.00	7,400
21	Mulch, Hardwood Shredded Bark	CYS	61	65.00	3,965
22	Plantings	SFT	5000	15.00	75,000
23	Trees	EA	65	400.00	26,000
24	Storm Sewer	LFT	2600	40.00	104,000
25	Storm Sewer Inlet, Rework	EA	8	1,500.00	12,000
26	Maintenance of Traffic	LS	1	2,500.00	2,500
27	Signage (general sheet)	EA	16	350.00	5,600
28	Signs, Project	EA	2	2,500.00	5,000
29	Bench, Metal	EA	4	1,500.00	6,000
30	Line, Paint, Solid, Red, 4"	LFT	2600	1.25	3,250
31	Bicycle Racks	EA	2	250.00	500
32	Concrete Drive Approach	SYS	250	80.00	20,000
33	Curb & Gutter	LFT	1469	12.00	17,628
34	Walkway Edging	LFT	4894	8.00	39,152
35	Symbols/Markings	EA	5	300.00	1,500
				Subtotal	641,200
				Design Engineering	64,120
				Construction Management	96,180
				Survey	9,900
				Subtotal	811,400
				Contingency (10%)	64,120
				Total	**$875,520**

Section 6: Brett Cable Connector - Country Club to Eastside Park Summary

Cost: $ 1,933,278 (2011 dollars)

Length: ~1.83 miles (~9,664 linear feet) of bike lanes

6. Brett Cable Connector - Country Club to Eastside Park

a. Setting Description

Section 6 is the second section needed to connect North Elementary School to the south and north campus of Eastside Park. This section is located in a primarily low-density neighborhood that completely lacks sidewalks. Green Acres Road is approximately 20 feet-wide. Brett Cable varies in width, ranging from 18 feet-wide to 24 feet-wide, and has drainage ditches running along each side. Sugarland Road and 21st Street are 24 feet-wide.

Brett Cable Road.

b. Project Description

This section of the trail system will be constructed entirely as bike lanes. The bike lanes begin at the intersection of Brett Cable Road (adjacent to the Washington Country Club) and Green Acres Road. The bike lanes will be constructed as one-way pairs, one on each side of the

Section 6: Brett Cable Road Connector - North Elementary School to Green Acres Road

Park Avenue.

street. The lanes will travel northward until they head in an easterly direction along Brett Cable Road. From Brett Cable, the lanes will shift onto Sugarland Road, heading south until it reaches the north entrance of the south campus of Eastside Park. Sugarland Road changes names two times before it reaches the park. First, changing into Park Avenue and then changing into 21st Street.

There will be approximately 1.83 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 8. A detailed engineer's rendering of this section can be found in Exhibit 6 and Exhibit 7 in Appendix B.

c. Additional Improvements

With the need to widen the roadways to accommodate the bike lanes on Brett Cable Road and Green Acres Road, new curbs and stormwater drainage work has been anticipated. Additionally, utility lines may also need to be relocated.

d. Potential Challenges

It appears that there will be an adequate amount of right-of-way available for the road widening, however that will need to be confirmed before the construction phase commences. If it is determined that there is a lack of adequate right-of-way available, the city may need to seek an easement for this portion of the trail.

Table 8: Section 6 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 6 - BRETT CABLE CONNECTOR COUNTRY CLUB TO EASTSIDE PARK MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	26,500.00	26,500
2	Mobilization and Demobilization	LS	1	66,000.00	66,000
3	Clearing Right-of-Way/Site Clearing	LS	1	60,000.00	60,000
4	Special Subgrade Treatment	SYS	4832	4.00	19,328
5	Excavation, Common	CYS	6090	10.00	60,900
6	Finish Grading	SFT	95,855	0.15	14,378
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	24,500.00	24,500
9	Compacted Aggregate for Base No. 53	TON	3356	25.00	83,900
10	HMA Surface, Type A	TON	399	95.00	37,905
11	HMA Intermediate, Type A	TON	1196	85.00	101,660
12	Sidewalk, Concrete, Plain Broom Finish	SYS	300	40.00	12,000
13	Pavement Markings	LFT	840	1.50	1,260
14	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
15	Fertilizer	TON	0.9	950.00	855
16	Seed Mixture	LBS	550	3.00	1,650
17	Mulching Material	TON	4.4	400.00	1,760
18	Sodding, Nursery	SYS	10650	3.50	37,275
19	Topsoil	CYS	74	40.00	2,960
20	Mulch, Hardwood Shredded Bark	CYS	24	65.00	1,560
21	Plantings	SFT	2000	15.00	30,000
22	Trees	EA	150	400.00	60,000
23	Storm Sewer	LFT	3500	40.00	140,000
24	Storm Sewer - Inlet Rework	EA	25	1,500.00	37,500
25	Maintenance of Traffic	LS	1	2,500.00	2,500
26	Signage (general sheet)	EA	52	350.00	18,200
27	Signs, Project	EA	2	2,500.00	5,000
28	Curb & Gutter	LFT	9662	12.00	115,944
29	Concrete Drive Approach	SYS	2564	80.00	205,120
30	Lane Lines	LFT	18385	5.00	91,925
31	Symbols/Markings	EA	16	300.00	4,800
32	Utility Relocation	LS	1	150,000.00	150,000
				Subtotal	1,417,480
				Design Engineering	141,748
				Construction Management	212,622
				Survey	19,680
				Subtotal	1,791,530
				Contingency (10%)	141,748
				Total	**$1,933,278**

Section 7: Bedford / Glennwood Connector Summary

Cost: $ 2,053,541 (2011 dollars)

Length: ~ 0.60 miles (~2,485 linear feet) of trails and ~0.24 miles (~1,247 linear feet) of bike lanes

7. Bedford / Glennwood Connector - 21st Street to Eastside Park North Campus

a. Setting Description

Section 7 provides access to the north campus of Eastside Park. This portion of Eastside Park has been underutilized due to its lack of access to the adjoining neighborhoods. The 20 foot-wide Bedford Road has been cut into a hill, causing the roadway to be approximately four feet lower than land surrounding it. Glennwood Road and Eastside Park Road are also narrow, however all houses are set back far from the edge of the road.

b. Project Description

This section of the trail system begins at the intersection of Bedford Road and Sugarland Road. At this intersection, the bike lanes are one-way pairs, one on each side of the street, and remain so until Bedford Road connects to Glennwood Road. To accommodate bike lanes, Bedford Road will require widening. At the intersection of Bedford Road and Glennwood Road, the bike lanes convert into a trail located on the south side of Glennwood. The trail then proceeds to encircle the north campus of Eastside Park and exits back on to Glennwood Road, directly west of the north campus entryway. At the intersection of Glennwood Road and Eastside Park Road, the trail shifts southward, with the trail remaining on the west side of the road. A small pedestrian bridge will be constructed over the creek that crosses under Eastside Park Road. The Section 7 portion of the trail will end directly south of the bridge.

Section 7: Bedford / Glennwood Connector - 21st Street to Eastside park North Campus

The intersection of Bedford Road and Glennwood Road.

There will be approximately 0.60 miles of trail and 0.24 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 9. A detailed engineer's rendering of this section can be found in Exhibit 7 in Appendix B.

c. Additional Improvements

Due to the topography surrounding Bedford Road, a 100-foot long and four-feet tall retaining wall will need to be constructed.

The cost of adding a playground to this portion of Eastside Park has been added into the final estimate. The playground may help this section of the park to become a more desirable location to visit.

d. Potential Challenges

With the exception of the land used for the trail at Eastside Park, easements may be needed along Bedford Road, Glennwood Road and Eastside Park Road.

Table 9: Section 7 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 7 - BEDFORD / GLENNWOOD CONNECTOR 21ST STREET TO EASTSIDE PARK NORTH CAMPUS MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	36,000.00	36,000
2	Mobilization and Demobilization	LS	1	90,000.00	90,000
3	Clearing Right-of-Way/Site Clearing	LS	1	40,000.00	40,000
4	Special Subgrade Treatment	SYS	4538	4.00	18,152
5	Excavation, Common	CYS	7148	10.00	71,480
6	Finish Grading	SFT	84,467	0.15	12,670
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	24,400.00	24,400
9	Compacted Aggregate for Base No. 53	TON	3076	25.00	76,900
10	HMA Surface, Type A	TON	362	95.00	34,390
11	HMA Intermediate, Type A	TON	694	85.00	58,990
12	Sidewalk, Concrete 5" (colored/textured)	SYS	87	60.00	5,220
13	Sidewalk, Concrete, Plain Broom Finish	SYS	1106	40.00	44,240
14	HMA Patching	TON	116	200.00	23,200
15	Walkway Edging	LFT	7484	8.00	59,872
16	Pavement Markings	LFT	90	1.50	135
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.8	950.00	760
19	Seed Mixture	LBS	513	3.00	1,539
20	Mulching Material	TON	5.1	400.00	2,040
21	Sodding, Nursery	SYS	7329	3.50	25,652
22	Topsoil	CYS	306	40.00	12,240
23	Mulch, Hardwood Shredded Bark	CYS	101	65.00	6,565
24	Plantings	SFT	8274	15.00	124,110
25	Trees	EA	200	400.00	80,000
26	Storm Sewer	LFT	2000	40.00	80,000
27	Storm Sewer - Inlet Rework	EA	15	1,500.00	22,500
28	Maintenance of Traffic	LS	1	4,000.00	4,000
29	Signage (general sheet)	EA	12	350.00	4,200
30	Signs, Project	EA	2	2,500.00	5,000
31	Bench, Metal	EA	6	1,500.00	9,000
32	Line, Paint, Solid, Red, 4"	LFT	2200	1.25	2,750
33	Bicycle Racks	EA	2	250.00	500
34	Curb & Gutter	LFT	4165	12.00	49,980
35	Walkway Edging	LFT	7484	8.00	59,872
36	Bicycle Lane Lines	LFT	2602	5.00	13,010
37	Pedestrian Bridge	LFT	30	1,500.00	45,000
38	Symbols/Markings	EA	10	300.00	3,000
39	Playground Base	TON	115	25.00	2,875
40	Playground Surface	LS	1	108,000.00	108,000
41	Playground Equipment	LS	1	250,000.00	250,000
				Subtotal	1,510,342
				Design Engineering	151,034
				Construction Management	226,551
				Survey	14,580
				Subtotal	1,902,507
				Contingency (10%)	151,034
				Total	**$2,053,541**

Section 8: Eastside Park Connector - Eastside Park Road to South Campus Community Center Summary

Cost: $ 428,649 (2011 dollars)

Length: ~ 0.31miles (~ 1,532 linear feet) of trails

8. Eastside Park Connector - Eastside Park Road to South Campus Community Center

a. Setting Description

Section 8 will provide more convenient and scenic access to Eastside Park for the subdivisions being constructed east of Eastside Park Road. There is a small creek bed that flows from just east of Eastside Park Road to the upper lake. The landscape surrounding the creek bed is steep and wooded. The Park East Mobile Park, 4-H buildings and two single-family homes are located south of the creek bed.

Drainage basin south of the upper lake.

Other significant features of this section are located along the south shore of the upper lake. Since the upper lake was created by building a large earthen dam, there is a steep embankment that is angled downward towards the parking lot. A large spillway, which begins at the southeast corner of the upper lake, provides flood management by guiding high waters into a large stormwater basin located between the parking lot and driveway that leads to the 4-H buildings.

Section 8: Eastside Park Connector - Eastside Park Road to South Campus

Spillway leading from upper lake.

b. Project Description

This section begins at Eastside Park Road, directly south of the creek bed. The trail moves westward, traveling closely to the creek bed and then around the southern edges of the lake. The land around the embankment surrounding the southern portion of the lake will need to be leveled at some locations to accommodate the trail. West of the drainage basin, there is a fork in the trail. One fork continues to travel westward until the section ends at Burkhardt Drive near the southeast edge of the upper lake. The other fork travels in a southerly direction and ends at the north edge of the parking lot.

There will be approximately 0.31 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 10. A detailed engineer's rendering of this section can be found in Exhibit 8 in Appendix B.

c. Additional Improvements

In an effort to not affect the upper lake's spillway, a swale will be created to divert water into a drainage pipe and away from the trail. This drainage pipe will lead to the basin that is located just north of the parking lot.

d. Potential Challenges

Obtaining adequate right-of-way for the segment of trail that is located between the creek bed and the adjacent residences may be challenging.

Table 10: Section 8 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 8 - EASTSIDE PARK CONNECTOR EASTSIDE PARK ROAD TO SOUTH CAMPUS COMMUNITY CENTER MARCH 17, 2011					
Item	Pay Item	Unit	QTY	Unit Cost	Total Cost
1	Construction Engineering	LS	1	6,000.00	6,000
2	Mobilization and Demobilization	LS	1	14,500.00	14,500
3	Clearing Right-of-Way/Site Clearing	LS	1	50,000.00	50,000
4	Special Subgrade Treatment	SYS	1875	4.00	7,500
5	Excavation, Common	CYS	3650	10.00	36,500
6	Finish Grading	SFT	49,902	0.15	7,485
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	7,700.00	7,700
9	Compacted Aggregate for Base No. 53	TON	675	25.00	16,875
10	HMA Surface, Type A	TON	141	95.00	13,395
11	HMA Intermediate, Type A	TON	234	85.00	19,890
12	Sidewalk, Concrete 5" (colored/textured)	SYS	52.3	60.00	3,138
13	Sidewalk, Concrete, Plain Broom Finish	SYS	11	40.00	440
14	HMA Patching	TON	2	200.00	400
15	Walkway Edging	LFT	3022	8.00	24,176
16	Pavement Markings	LFT	40	1.50	60
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.46	950.00	437
19	Seed Mixture	LBS	288	3.00	864
20	Mulching Material	TON	2.3	400.00	920
21	Sodding, Nursery	SYS	2772	3.50	9,702
22	Topsoil	CYS	112	40.00	4,480
23	Mulch, Hardwood Shredded Bark	CYS	37	65.00	2,405
24	Plantings	SFT	3022	15.00	45,330
25	Trees	EA	26	400.00	10,400
26	Storm Sewer	LFT	300	30.00	9,000
27	Storm Sewer Inlet, Rework	EA	1	1,500.00	1,500
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	12	350.00	4,200
30	Signs, Project	EA	1	2,500.00	2,500
31	Bench, Metal	EA	2	1,500.00	3,000
32	Line, Paint, Solid, Red, 4"	LFT	772	1.25	965
33	Symbols/Markings	EA	6	300.00	1,800
34	Bicycle Racks	EA	2	250.00	500
				Subtotal	313,162
				Design Engineering	31,316
				Construction Management	46,974
				Survey	5,880
				Subtotal	397,333
				Contingency (10%)	31,316
				Total	**$428,649**

Section 9: Eastside Park / South Campus Improvements - Memorial Avenue to Community Center Summary

Cost: $ 1,018,821 (2011 dollars)

Length: ~ 0.54 miles (~ 2,826 linear feet) of trails

9. Eastside Park / South Campus Improvements - Memorial Avenue to Community Center

a. Setting Description

Section 9 is located on the western half of Eastside Park – South Campus. Sidewalks exist throughout this section of the park but the sidewalks are too narrow to support a trail. This portion of the park contains many amenities including a screened in pavilion, a community building, two gazebos, a bandstand, basketball courts, horseshoe pits and a large playground.

Eastside Park Signage.

b. Project Description

This section of trail begins north of the community building and travels west until it connects to Section 6, just south of the intersection of 21st Street and Burkhardt Drive.

Section 9: Eastside Park / South Campus Improvements - Memorial Avenue to Community Center

The screened in pavillion at Eastside Park.

From this point the trail winds southward around a small pond and ends at the intersection of 21st and Memorial Avenue. A retaining wall will be constructed along the west side of the pond. The trail forks south of the pond. The first fork provides a small link to Parkdale Drive. The other fork in the trail, located south of the pond, travels eastward towards the lower lake and provides a connection to Section 10.

There will be approximately 0.54 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 11. A detailed engineer's rendering of this section can be found in Exhibit 8 in Appendix B.

c. Additional Improvements

Crosswalks should be striped at the intersections of: 21st and Burkhardt, 21st and Parkdale, and 21st and Memorial. Additional trail crossing signage may also be needed.

d. Potential Challenges

No potential challenges are anticipated.

Table 11: Section 9 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 9 - EASTSIDE PARK / SOUTH CAMPUS IMPROVEMENTS MEMORIAL AVENUE TO COMMUNITY CENTER MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	13,000.00	13,000
2	Mobilization and Demobilization	LS	1	33,000.00	33,000
3	Clearing Right-of-Way/Site Clearing	LS	1	40,000.00	40,000
4	Special Subgrade Treatment	SYS	3608	4.00	14,432
5	Excavation, Common	CYS	6521	10.00	65,210
6	Excavation, Lake	CYS	10000	6.50	65,000
7	Finish Grading	SFT	85,757	0.15	12,864
8	HMA Surface, Type A	TON	203	95.00	19,285
9	HMA Intermediate, Type A	TON	339	85.00	28,815
10	Compacted Aggregate for Base No. 53	TON	889	25.00	22,225
11	Curb & Gutter	LFT	927	12.00	11,124
12	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
13	Erosion Control Admin/Maintenance	LS	1	13,500.00	13,500
14	Compacted Aggregate for Base No. 53	TON	1214	25.00	30,350
15	HMA Surface, Type A (Trail)	TON	211	95.00	20,045
16	HMA Intermediate, Type A (trail)	TON	352	85.00	29,920
17	Sidewalk, Concrete 5" (colored/textured)	SYS	280	60.00	16,800
18	Sidewalk, Concrete, Plain Broom Finish	SYS	672	40.00	26,880
19	HMA Patching	TON	7.3	200.00	1,460
20	Walkway Edging	LFT	4704	8.00	37,632
21	Pavement Markings	LFT	5362	1.50	8,043
22	Bicycle Lane Lines	LFT	3600	5.00	18,000
23	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
24	Fertilizer	TON	0.4	950.00	380
25	Seed Mixture	LBS	250	3.00	750
26	Mulching Material	TON	2	400.00	800
27	Sodding, Nursery	SYS	4764	3.50	16,674
28	Topsoil	CYS	98	40.00	3,920
29	Mulch, Hardwood Shredded Bark	CYS	32	65.00	2,080
30	Plantings	SFT	2636	15.00	39,540
31	Trees	EA	64	400.00	25,600
32	Storm Sewer	LFT	830	30.00	24,900
33	Storm Sewer Inlet, Rework	EA	3	1,500.00	4,500
34	Maintenance of Traffic	LS	1	2,500.00	2,500
35	Signage (general sheet)	EA	20	350.00	7,000
36	Signs, Project	EA	3	2,500.00	7,500
37	Bench, Metal	EA	8	1,500.00	12,000
38	Line, Paint, Solid, Red, 4"	LFT	2681	1.25	3,351
39	Symbols/Markings	EA	16	300.00	4,800
40	Bicycle Racks	EA	4	250.00	1,000
41	Walls (Modular)	SFT	840	15.00	12,600
42	Wall Erection	SFT	840	15.00	12,600
43	Structure Backfill, Modular Wall	CYS	125	25.00	3,125
44	Railing (Retaining Wall)	LFT	120	170.00	20,400
				Subtotal	735,705
				Design Engineering	73,570
				Construction Management	110,356
				Survey	25,620
				Subtotal	945,251
				Contingency (10%)	73,570
				Total	**$1,018,821**

Section 10: Eastside Park / South Campus Improvements - Lake Shore Addition Summary

Cost: $ 942,241(2011 dollars)

Length: ~ 0.38 miles (~2,007 linear feet) of trails

Pedestrian bridge will be widen to provide more room for two-lanes of pedestrian traffic.

10. Eastside Park / South Campus Improvements - Lake Shore Addition

a. Setting Description

Section 10 is located along the north and east shore lines of the lower lake of Eastside Park. A bridge, located at the southeast corner of the parking lot, allows park users to cross to the eastern lake shore area. The bridge is approximately 78 feet long and the deck of the bridge is seven feet wide. A narrow roadway, known as 20th Century Drive, is located adjacent to this section. The roadway connects Burkhardt Road to Memorial Avenue, passing along the edge of the east side of the lower lake. Existing sidewalks connect the bridge to Memorial

Section 10: Eastside Park / South Campus Improvements - Lake Shore Addition

Wall will be built out into the lake to provide more room for the trail.

Avenue. Along the existing sidewalks, electrical hookups are available for festivals and events.

b. Project Description

This section of trail begins at the northeast corner of the main parking lot at Eastside Park. The trail follows the west shore of the lake until it reaches the bridge. The bridge will be widen to accomodate two lanes (one for each direction of movement) of pedestrian/bicycle traffic. At this location, the trail forks into east and west directions. One fork continues along the west shore until it reaches the beginning of Section 9. This fork will require that land south of the bridge (approximately a length of 250 feet) be built out into the lake by six feet. The east fork travels over the bridge and then turns south. At this turn the trail splits into one-way pairs. One one-way pair will use the existing walk way while the other one-way pair will be newly constructed in existing grass space. The one-way pairs will merge into an eight foot-wide trail shortly before this section ends at the intersection of 20th Century Drive and Memorial Avenue.

There will be approximately 0.38 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 12. A detailed engineer's rendering of this section can be found in Exhibit 8 in Appendix B.

c. Additional Improvements

No additional improvements have been identified

d. Potential Challenges

Challenges have not been anticipated for this section.

Table 12: Section 10 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 10 - EASTSIDE PARK / SOUTH CAMPUS IMPROVEMENTS LAKE SHORE ADDITION MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	13,000.00	13,000
2	Mobilization and Demobilization	LS	1	32,500.00	32,500
3	Clearing Right-of-Way/Site Clearing	LS	1	80,000.00	80,000
4	Special Subgrade Treatment	SYS	1185	4.00	4,740
5	Excavation, Common	CYS	2272	10.00	22,720
6	Excavation, Lake	CYS	500	10.00	5,000
7	Finish Grading	SFT	9,695	0.15	1,454
8	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
9	Erosion Control Admin/Maintenance	LS	1	10,900.00	10,900
10	Compacted Aggregate for Base No. 53	TON	768	25.00	19,200
11	HMA Surface, Type A	TON	272	95.00	25,840
12	HMA Intermediate, Type A	TON	148	85.00	12,580
13	Sidewalk, Concrete 5" (colored/textured)	SYS	48	60.00	2,880
14	Sidewalk, Concrete, Plain Broom Finish	SYS	814	40.00	32,560
15	HMA Patching	TON	64	200.00	12,800
16	Walkway Edging	LFT	4181	8.00	33,448
17	Pavement Markings	LFT	80	1.50	120
18	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
19	Fertilizer	TON	0.2	950.00	190
20	Seed Mixture	LBS	133	3.00	399
21	Mulching Material	TON	1.06	400.00	424
22	Sodding, Nursery	SYS	1539	3.50	5,387
23	Topsoil	CYS	172	40.00	6,880
24	Mulch, Hardwood Shredded Bark	CYS	57	65.00	3,705
25	Plantings	SFT	4663	15.00	69,945
26	Trees	EA	50	400.00	20,000
27	Storm Sewer	LFT	300	30.00	9,000
28	Storm Sewer Inlet, Rework	EA	1	1,500.00	1,500
29	Maintenance of Traffic	LS	1	2,500.00	2,500
30	Signage (general sheet)	EA	20	350.00	7,000
31	Signs, Project	EA	1	2,500.00	2,500
32	Bench, Metal	EA	6	1,500.00	9,000
33	Line, Paint, Solid, Red, 4"	LFT	1045	1.25	1,306
34	Bicycle Racks	EA	6	250.00	1,500
35	HMA Widening	TON	277	150.00	41,550
36	Curb & Gutter	LFT	400	12.00	4,800
37	Walkway Edging	LFT	4181	8.00	33,448
38	Symbols/Markings	EA	6	300.00	1,800
39	Walls (Modular)	SFT	2080	15.00	31,200
40	Wall Erection	SFT	2080	15.00	31,200
41	Structure Backfill, Modular Wall	CYS	616	30.00	18,480
42	Railing (retaining wall)	LFT	260	200.00	52,000
43	Bridge Widening	LSUM	1	20,000.00	20,000
				Subtotal	687,556
				Design Engineering	68,756
				Construction Management	103,133
				Survey	14,040
				Subtotal	873,485
				Contingency (10%)	68,756
				Total	**$942,241**

Section 11: Enterprise Zone Connector Summary

Cost: $ 1,449,746 (2011 dollars)

Length: ~ 1.30 miles (~6,885 linear feet) of trails

11. Enterprise Zone Connector - Eastside Park to I-69 Corridor

a. Setting Description

Section 11 will connect the future I-69 corridor to Eastside Park. Once the I-69 interchange is constructed, this section of the city is anticipated to become a thriving commercial and industrial area. Currently this area is a mixture of commercial, industrial and residential uses. There are a few single-family homes located along Business 50 and a large multi-family apartment complex, James Town Square Apartments, located north of State Street and 21st Street. No sidewalks exist in this section, with the exception of the existing sidewalk that encircles the lower lake at Eastside Park. There is a traffic signal located at the intersection of 21st Street and Business 50.

b. Project Description

This section of trail will begin at the intersection of Memorial Avenue and 20th Century Drive. The trail will continue to follow the path of the existing sidewalk until the existing sidewalk turns to travel northward. The trail will then continue to the west, between the City of Washington Street Department's storage facility and the railroad tracks, until the trail reaches 21st Street. The trail forks at this point. The first fork will allow trail users to cross 21st Street and then travel northward to connect to Section 12 or Section 9. The second fork of the trail continues over the railroad tracks and then transitions into an easterly direction directly south of the railroad tracks. The trail then continues on to follow the boundary of the James Town Apartment Complex until the southernmost midpoint of the apartment complex. The trail then travels southward, to the east of the Crane Federal Credit

Section 11: Enterprise Zone Connector - Eastside Park to I-69 Corridor

South shoreline of the lower lake and Memorial Avenue.

Union building. Once the trail reaches State Street, the trail turns to travel northwest until it switches back into a southerly direction at the intersection of 21st Street and State Street. The trail continues to travel south on the eastside of 21st Street until the trail crosses over Business 50. Once the trail reaches Business 50, the trail travels to the east until it reaches the city limits.

There will be approximately 1.30 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 13. A detailed engineer's rendering of this section can be found in Exhibit 9 in Appendix B.

c. Additional Improvements

Mechanisms must be in place to ensure safe railroad crossing for trail users. There are a number of devices that can be used at this location including a special pedestrian/bicyclist gate or a turn style.

Crosswalks should be painted at the intersections of: 21st Street and Memorial Avenue, State Street and 21st Street, and 21st Street and Business 50. A crosswalk and appropriate signage should also be placed north of the railroad tracks.

d. Potential Challenges

The city and the state own adequate right-of-way for most of the trail, however, places where the trail travels around and behind the apartment complex and commercial buildings may present some issues.

Table 13: Section 11 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 11 - ENTERPRISE ZONE CONNECTOR EASTSIDE PARK TO I-69 CORRIDOR MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	20,700.00	20,700
2	Mobilization and Demobilization	LS	1	51,700.00	51,700
3	Clearing Right-of-Way/Site Clearing	LS	1	50,000.00	50,000
4	Special Subgrade Treatment	SYS	6965	4.00	27,860
5	Excavation, Common	CYS	4596	10.00	45,960
6	Finish Grading	SFT	105,598	0.15	15,840
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	30,500.00	30,500
9	Compacted Aggregate for Base No. 53	TON	3659	25.00	91,475
10	HMA Surface, Type A	TON	575	85.00	48,875
11	HMA Intermediate, Type A	TON	957	80.00	76,560
12	Sidewalk, Concrete 5" (colored/textured)	SYS	489	60.00	29,340
13	Sidewalk, Concrete, Plain Broom Finish	SYS	2111	40.00	84,440
14	HMA Patching	TON	95	200.00	19,000
15	Walkway Edging	LFT	12333	8.00	98,664
16	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
17	Fertilizer	TON	1.56	950.00	1,482
18	Seed Mixture	LBS	868	3.00	2,604
19	Mulching Material	TON	6.9	400.00	2,760
20	Sodding, Nursery	SYS	15160	3.50	53,060
21	Topsoil	CYS	40	40.00	1,600
22	Mulch, Hardwood Shredded Bark	CYS	32	65.00	2,080
23	Plantings	SFT	1080	15.00	16,200
24	Trees	EA	110	400.00	44,000
25	Shrubs	EA	90	50.00	4,500
26	Storm Sewer	LFT	1200	30.00	36,000
27	Storm Sewer Inlet, Rework	EA	24	1,500.00	36,000
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	30	350.00	10,500
30	Signs, Project	EA	1	2,500.00	2,500
31	Bench, Metal	EA	2	1,500.00	3,000
32	Line, Paint, Solid, Red, 4"	LFT	6169	1.25	7,711
33	Bicycle Racks	EA	4	250.00	1,000
34	Concrete Drive Approach	SYS	1285	80.00	102,800
35	HMA widening	TON	95	150.00	14,250
36	Curb & Gutter	LFT	1300	12.00	15,600
37	Pavement Markings	LFT	792	1.50	1,188
38	Railroad Crossing	LS	1	30,000.00	30,000
39	Signal Modification	LS	1	20,000.00	20,000
				Subtotal	1,106,849
				Design Engineering	110,685
				Construction Management	166,027
				Survey	5,500
				Subtotal	1,389,061
				Contingency (10%)	110,685
				Total	**$1,499,746**

Section 12: Memorial Avenue Connector Summary

Cost: $ 1,259,698 (2011 dollars)

Length: ~ 0.45 miles (~2,366 linear feet) of trails

12. Memorial Avenue Connector - Daviess Community Hospital to Eastside Park

a. Setting Description

Section 12 uses Memorial Avenue as a route to connect Eastside Park to Daviess Community Hospital. Memorial Avenue becomes Walnut Street west of 14th Street.

This area is primarily residential; however there are a few businesses and physician offices along the route. Existing sidewalks are located between the hospital and 17th Street. Parking is not allowed on the south side of Memorial Avenue.

Memorial Avenue.

b. Project Description

This section will consist of a trail constructed on the north side of Memorial Avenue between Eastside Park and the southwest corner of the hospital grounds. Parking on the southside of the street will be removed, shifting the lanes

Section 12: Memorial Avenue Connector - Daviess Community Hospital to Eastside Park

Existing sidewalk in front of Daviess Community Hospital.

of traffic southward, to provide the additional amount of room required for the trail.

There will be approximately 0.45 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 14. A detailed engineer's rendering of this section can be found in Exhibit 10 in Appendix B.

c. Additional Improvements

Parking bays, between 15th Street and 21st Street were added to the design to improve the appearance of Memorial Avenue and provide more green space.

Crosswalks should be striped at the intersections of 21st Street and Memorial Avenue and 15th Street and Memorial Avenue.

d. Potential Challenges

During initial findings, it appears that there will be adequate right-of-way available to provide the necessary space for the trail if the trail is constructed up to the existing curb. Further investigation of available right-of-way is recommended.

Table 14: Section 12 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 12 - MEMORIAL AVENUE CONNECTOR DAVIESS COMMUNITY HOSPITAL TO EASTSIDE PARK (SOUTH CAMPUS) MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	17,000.00	17,000
2	Mobilization and Demobilization	LS	1	42,500.00	42,500
3	Clearing Right-of-Way/Site Clearing	LS	1	39,000.00	39,000
4	Special Subgrade Treatment	SYS	3104	4.00	12,416
5	Excavation, Common	CYS	3584	10.00	35,840
6	Finish Grading	SFT	33,696	0.15	5,054
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	9,900.00	9,900
9	Compacted Aggregate for Base No. 53	TON	1399	25.00	34,975
10	HMA Surface, Type A	TON	183	95.00	17,385
11	HMA Intermediate, Type A	TON	212	85.00	18,020
12	Sidewalk, Concrete 5" (colored/textured)	SYS	427	60.00	25,620
13	Sidewalk, Concrete, Plain Broom Finish	SYS	297	40.00	11,880
14	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
15	Fertilizer	TON	0.3	950.00	285
16	Seed Mixture	LBS	100	3.00	300
17	Mulching Material	TON	0.4	400.00	160
18	Sodding, Nursery	SYS	2808	3.50	9,828
19	Topsoil	CYS	125	40.00	5,000
20	Mulch, Hardwood Shredded Bark	CYS	41	65.00	2,665
21	Plantings	SFT	3360	15.00	50,400
22	Trees	EA	64	400.00	25,600
23	Storm Sewer	LFT	1961	30.00	58,830
24	Storm Sewer Inlet, Rework	EA	7	1,500.00	10,500
25	Maintenance of Traffic	LS	1	5,000.00	5,000
26	Signage (general sheet)	EA	26	350.00	9,100
27	Signs, Project	EA	3	2,500.00	7,500
28	Bench, Metal	EA	4	1,500.00	6,000
29	Line, Paint, Solid, Red, 4"	LFT	1961	1.25	2,451
30	Symbols/Markings	EA	10	300.00	3,000
31	Bicycle Racks	EA	6	250.00	1,500
32	HMA Patching	TON	212	200.00	42,400
33	Concrete Drive Approach	SYS	482	80.00	38,560
34	Curb & Gutter	LFT	28361	12.00	340,332
35	Walkway Edging	LFT	4213	8.00	33,704
36	Pavement Markings	LFT	420	1.50	630
				Subtotal	925,436
				Design Engineering	92,544
				Construction Management	138,815
				Survey	10,360
				Subtotal	1,167,155
				Contingency (10%)	92,544
				Total	**$1,259,698**

Section 13: 15th Street Connector Summary

Cost: $ 1,656,435 (2011 dollars)

Length: ~ 0.47 miles (~2,490 linear feet) of trails
~ 0.37 miles (~1,971 linear feet) of bike lanes

13. 15th Street Connector - Memorial Avenue to Business 50

15th Street Bridge.

a. Setting Description

Section 13 will connect Memorial Avenue to the commercial areas located on Business 50 via 15th Street. 15th Street is a 32-foot-wide road within a single-family residential area. A 25 foot-wide bridge is located over the railroad tracks south of Van Trees Street. Currently, Business 50 is used as the primary east/west entrance into the city. Future roadway improvements have already been identified in the *Feasibility Study for Business 50 and Commercial/Industrial Development Sites* (June 2010) to address the problems associated with the significant traffic volumes found on Business 50. Upon the completion of the I-69 interchange traffic volumes on Business 50 are anticipated to increase. Wolf Street is a dead end road that terminates directly west of the Church of Christ parking lot. A traffic signal is located at the intersection of SR 257, Wolf Street and Business 50.

Section 13: 15th Street Connector - Memorial Avenue to Business 50

b. Project Description

This section of the trail system begins as a trail at the intersection of Memorial Avenue and 15th Street. The trail travels southward on the west side of 15th Street until Hazel Street. There will be a new pedestrian bridge constructed over the railroad tracks, adjacent to the existing bridge. At the intersection of Hazel Street and 15th Street, the trail transitions into two one-way pair bike lanes, one on each side of 15th Street. The bike lanes continue south until they reach Business 50. At the intersection of Business 50 and 15th Street, the bike lanes transition back into a trail, traveling west on the north side of Business 50. After the trail passes Hillside Drive, the trail veers from the edge of Business 50 and connects to the terminus of Wolf Street. Following the south side of Wolf Street, the trail section ends at the intersection of Business 50, SR 257 and Wolf Street.

The trail will be situated between Business 50 and the Church of Christ Parking Lot.

There will be approximately 0.37 miles of trail and 0.47 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 15. A detailed engineer's rendering of this section can be found in Exhibit 11 in Appendix B..

c. Additional Improvements

Adequate trail crossing signage and crosswalk striping should be provided at the intersections of: 15th Street and Memorial Avenue, 15th Street and State Road, 15th Street and Business 50, and Wolf Street, Business 50 and SR 257.

d. Potential Challenges

Easements may need to be obtained from Memorial Avenue to Hazel Street and from the intersection of 15th Street to the intersection of Wolf Street and Business 50. 15th Street, between State Street and Business 50 contains a steep slope that may make it difficult to abide by the ADA (Americans with Disabilities Act) requirements.

Additional permits are require for the portion of trail crossing the railroad tracks. Since this can be a lengthy process, the permit should be pursued prior to seeking funding for this section.

Table 15: Section 13 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 13 - 15TH STREET TRAIL CONNECTOR MEMORIAL AVENUE TO BUSINESS 50 MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	22,600.00	22,600
2	Mobilization and Demobilization	LS	1	56,500.00	56,500
3	Clearing Right-of-Way/Site Clearing	LS	1	36,400.00	36,400
4	Special Subgrade Treatment	SYS	4723	4.00	18,892
5	Excavation, Common	CYS	6511	10.00	65,110
6	Finish Grading	SFT	66,066	0.15	9,910
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,145.00	15,145
9	Compacted Aggregate for Base No. 53	TON	2578	25.00	64,450
10	HMA Surface, Type A	TON	166	95.00	15,770
11	HMA Intermediate, Type A	TON	498	85.00	42,330
12	Sidewalk, Concrete 5" (colored/textured)	SYS	164	60.00	9,840
13	Sidewalk, Concrete, Plain Broom Finish	SYS	118	40.00	4,720
14	HMA Patching	TON	246	200.00	49,200
15	Walkway Edging	LFT	3911	8.00	31,288
16	Pavement Markings	LFT	600	1.50	900
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.6	950.00	570
19	Seed Mixture	LBS	375	3.00	1,125
20	Mulching Material	TON	3	400.00	1,200
21	Sodding, Nursery	SYS	7340	3.50	25,690
22	Topsoil	CYS	71	40.00	2,840
23	Mulch, Hardwood Shredded Bark	CYS	23	65.00	1,495
24	Plantings	SFT	1920	15.00	28,800
25	Trees	EA	68	400.00	27,200
26	Storm Sewer	LFT	1900	30.00	57,000
27	Storm Sewer Inlet, Rework	EA	30	1,500.00	45,000
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	30	350.00	10,500
30	Signs, Project	EA	1	2,500.00	2,500
31	Bicycle Lane Lines	LFT	4524	5.00	22,620
32	Bench, Metal	EA	2	1,500.00	3,000
33	Line, Paint, Solid, Red, 4"	LFT	2000	1.25	2,500
34	Symbols/Markings	EA	18	300.00	5,400
35	Bicycle Racks	EA	2	250.00	500
36	Concrete Drive Approach	SYS	1361	80.00	108,880
37	HMA widening	TON	410	150.00	61,500
38	Curb & Gutter	LFT	3403	12.00	40,836
39	Concrete Class A (Poured Walls/Stairs)	CYS	4	750.00	3,000
40	Railing (stairs)	LFT	20	100.00	2,000
41	Walls (Modular)	SFT	2110	15.00	31,650
42	Wall Erection	SFT	2110	15.00	31,650
43	Structure Backfill, Modular Wall	CYS	390	30.00	11,700
44	Railing (retaining wall)	LFT	200	150.00	30,000
45	Bridge	LFT	85	1,500.00	127,500
46	Signal Modification	LS	1	80,000.00	80,000
				Subtotal	1,216,811
				Design Engineering	121,681
				Construction Management	182,522
				Survey	13,740
				Subtotal	1,534,754
				Contingency (10%)	121,681
				Total	**$1,656,435**

Section 14: Helen Griffith Connector Summary

Cost: $ 1,152,138 (2011 dollars)

Length: ~ 0.52 miles (~2,748 linear feet) of trails

14. Helen Griffith Connector - Business 50 to Highland Avenue

a. Setting Description

Section 14 will connect Helen Griffith Elementary to surrounding neighborhoods and commercial areas located near the Business 50 corridor. Currently, Business 50 is used as the primary east/west entrance into the city. Traffic volumes seen on this roadway have caused some safety concerns for students walking to the elementary school. To calm traffic conditions and allow children to cross the road, the elementary school places a flashing light, attached to a dolly, at the intersection of Mill Street and Business 50. Additional safety measures will need to be taken upon the completion of the construction of the I-69 interchange, which will result in a further intensification of traffic volumes on Business 50.

The trail will be travel between the elementary school and the back lot line of a residential area.

Section 14: Helen Griffith Connector - Business 50 to Highland Avenue

Business 50 and available green space in front of the elementary school.

The Feasibility Study for Business 50 and Commercial/ Industrial Development Sites (June 2010) has identified other road improvements that will needed for the Business 50 corridor.

Sidewalks exist along Business 50, but they are mostly in a deteriorated condition and are in need for some repairs.

b. Project Description

This trail section begins at the southwest corner of the intersection of Business 50, Wolf Street and SR 257, in front of the City Hotel. The parking lot for the City Hotel may need to be reconfigured to accommodate the width of the trail. The trail travels west along the south side of Business 50 until it transitions to a south direction at the northeast corner of the Helen Griffith Elementary School grounds. Some residential lots between 11th Street and the school will need new concrete stairways and a four foot tall retaining wall to provide adequate space for the trail. The trail winds behind the west side of the school and its soccer fields until the trail reaches Highland Ave, where it terminates. Due to the significant amount of before and afterschool traffic, the position of the trail was designed in an effort to limit the possibility of vehicle/ pedestrian interaction.

There will be approximately 0.52 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 16. A detailed engineer's rendering of this section can be found in Exhibit 12 in Appendix B.

c. Additional Improvements

Other traffic calming measures should be considered at the intersection of Mill Street and Business 50. First, the crosswalk should be made more visible to approaching drivers by either restriping the crosswalk or by creating a raised crosswalk. Second, the city should consider adding a pedestrian island or bump-outs to reduce the amount of time a pedestrian/bicyclist is in the drive-able roadway. Finally, the city should consider adding more visible signage (complete with flashing lights) to alert drivers of the impending crossing area. The cost of the flashing school crossing signal has been added to the cost estimate. All improvements to this area must be done so with the permission of INDOT because Business 50 is considered a state road.

d. Potential Challenges

Obtaining adequate amount of right-of-way along Business 50 may be challenging.

Table 16: Section 14 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 14 - HELEN GRIFFITH ELEMENTARY SCHOOL CONNECTOR BUSINESS 50 TO HIGHLAND MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	16,000.00	16,000
2	Mobilization and Demobilization	LS	1	39,000.00	39,000
3	Clearing Right-of-Way/Site Clearing	LS	1	48,000.00	48,000
4	Special Subgrade Treatment	SYS	3340	4.00	13,360
5	Excavation, Common	CYS	5654	10.00	56,540
6	Finish Grading	SFT	60,345	0.15	9,052
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,145.00	15,145
9	Compacted Aggregate for Base No. 53	TON	1600	25.00	40,000
10	HMA Surface, Type A	TON	218	95.00	20,710
11	HMA Intermediate, Type A	TON	653	85.00	55,505
12	Sidewalk, Concrete 5" (colored/textured)	SYS	287	60.00	17,220
13	Sidewalk, Concrete, Plain Broom Finish	SYS	414	40.00	16,560
14	HMA Patching	TON	163	200.00	32,600
15	Walkway Edging	LFT	5635	8.00	45,080
16	Pavement Markings	LFT	766	1.50	1,149
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.5	950.00	475
19	Seed Mixture	LBS	325	3.00	975
20	Mulching Material	TON	2.6	400.00	1,040
21	Sodding, Nursery	SYS	6354	3.50	22,239
22	Topsoil	CYS	117	40.00	4,680
23	Mulch, Hardwood Shredded Bark	CYS	39	65.00	2,535
24	Plantings	SFT	3152	15.00	47,280
25	Trees	EA	40	400.00	16,000
26	Storm Sewer	LFT	1000	30.00	30,000
27	Storm Sewer Inlet, Rework	EA	10	1,500.00	15,000
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	24	350.00	8,400
30	Signs, Project	EA	1	2,500.00	2,500
31	Bench, Metal	EA	4	1,500.00	6,000
32	Line, Paint, Solid, Red, 4"	LFT	2500	1.25	3,125
33	Symbols/Markings	EA	8	300.00	2,400
34	Bicycle Racks	EA	6	250.00	1,500
35	Concrete Drive Approach	SYS	1123	80.00	89,840
36	Curb & Gutter	LFT	2259	12.00	27,108
37	Concrete Class A (Poured Walls/Stairs)	CYS	11	750.00	8,250
38	Railing (stairs)	LFT	220	100.00	22,000
39	Walls (Modular)	SFT	1150	15.00	17,250
40	Wall Erection	SFT	1150	15.00	17,250
41	Structure Backfill, Modular Wall	CYS	213	30.00	6,390
42	Guard Rail	LFT	100	150.00	15,000
43	48" Chain Link Type Fence	LFT	600	25.00	15,000
44	Flashing School Crossing Signals	EA	4	7,500.00	30,000
				Subtotal	845,258
				Design Engineering	84,526
				Construction Management	126,789
				Survey	11,040
				Subtotal	1,067,612
				Contingency (10%)	84,526
				Total	**$ 1,152,138**

Section 15: Highland Avenue / Troy Road Connector Summary

Cost: $ 906,050 (2011 dollars)

Length: ~ 0.47 miles (~2,495 linear feet) of trails

15. Highland Avenue / Troy Road Connector - Helen Griffith Elementary School to South Park

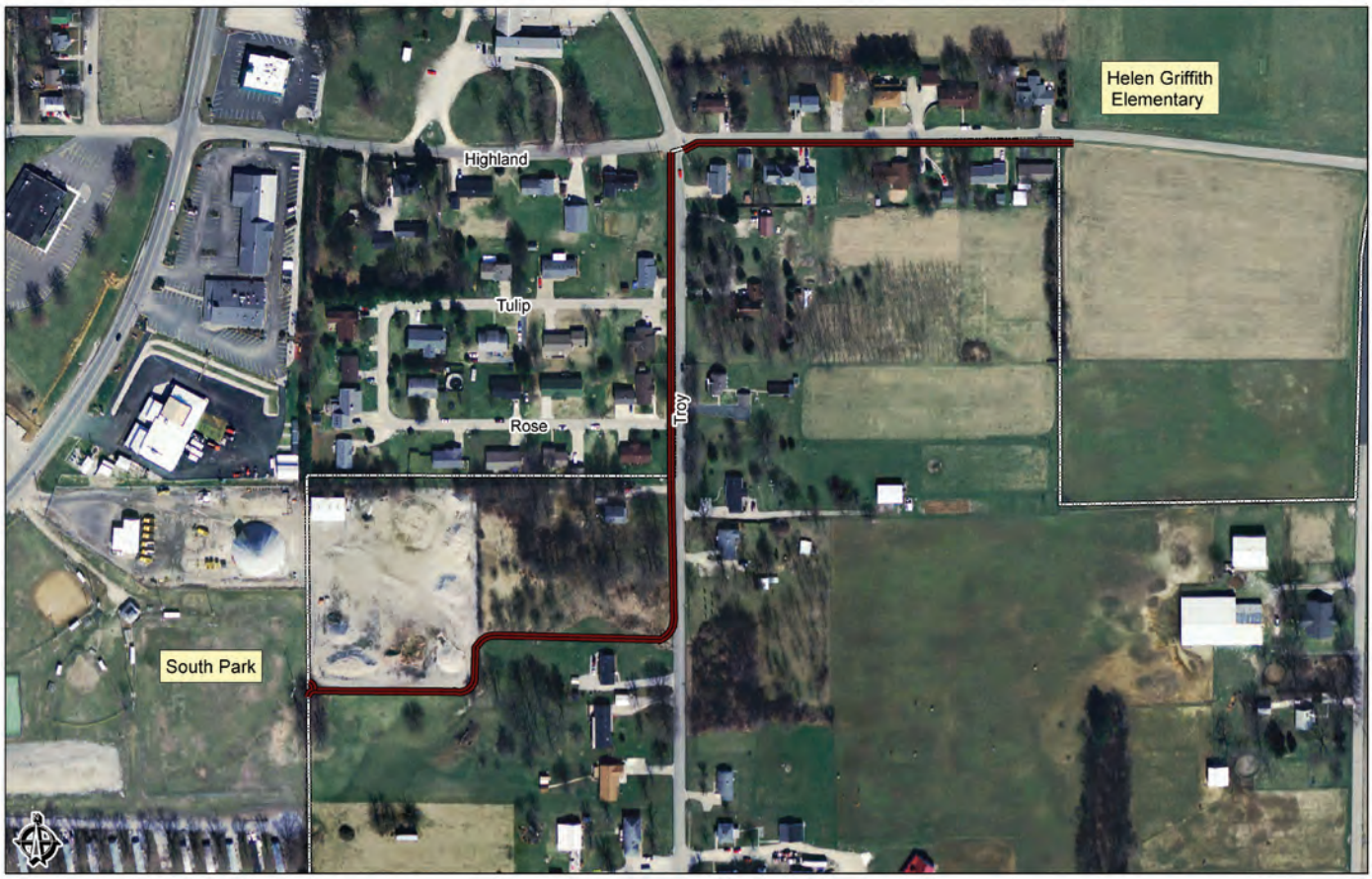
a. Setting Description

Section 15 is the first of many sections that connects Helen Griffith Elementary School to neighborhoods south and west of the school. This section will also link the underutilized South Park to Elementary School. The connector passes through a primarily residential and agricultural area. There are no existing sidewalks located within this section.

Troy Road, looking northward towards the intersection of Highland Avenue and Troy Road.

b. Project Description

This section of trail begins on the south side of Highland



Section 15: Highland Avenue / Troy Road Connector - Helen Griffith Elementary School to South Park

From Troy Road, facing west towards the INDOT property.

Avenue, south of the Helen Griffith Elementary School grounds. The trail travels westward until it crosses Troy Road, where the trail changes into a southward direction on the west side of Troy Road. Approximately 400 feet south of Rose Lane, the trail turns west again until it winds around the boundary of the INDOT property. This section of trail ends at the boundary between the INDOT property and South Park.

There will be approximately 0.47 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 17. A detailed engineer's rendering of this section can be found in Exhibit 13 in Appendix B.

c. Additional Improvements

Stormwater drainage improvements will be needed along this route. Costs for these improvements have been included in the estimate.

d. Potential Challenges

Initial findings indicated that there will be adequate right-of-way along Highland Avenue for this section of trail, however this should be verified. Obtaining adequate right-of-way for the remaining sections of trail may be an issue.

Table 17: Section 15 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 15 - HIGLAND / TROY CONNECTOR HELEN GRIFFITH ELEMENTARY SCHOOL TO SOUTH PARK MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	12,500.00	12,500
2	Mobilization and Demobilization	LS	1	31,000.00	31,000
3	Clearing Right-of-Way/Site Clearing	LS	1	69,500.00	69,500
4	Special Subgrade Treatment	SYS	2350	4.00	9,400
5	Excavation, Common	CYS	2655	10.00	26,550
6	Finish Grading	SFT	21,126	0.15	3,169
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,145.00	15,145
9	Compacted Aggregate for Base No. 53	TON	1454	25.00	36,350
10	HMA Surface, Type A	TON	194	95.00	18,430
11	HMA Intermediate, Type A	TON	581	85.00	49,385
12	Sidewalk, Concrete 5" (colored/textured)	SYS	1557	60.00	93,420
13	Sidewalk, Concrete, Plain Broom Finish	SYS	677	40.00	27,080
14	HMA Patching	TON	108	200.00	21,600
15	Walkway Edging	LFT	4372	8.00	34,976
16	Pavement Markings	LFT	218	1.50	327
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.4	950.00	380
19	Seed Mixture	LBS	213	3.00	639
20	Mulching Material	TON	1.7	400.00	680
21	Sodding, Nursery	SYS	4103	3.50	14,361
22	Topsoil	CYS	74	40.00	2,960
23	Mulch, Hardwood Shredded Bark	CYS	25	65.00	1,625
24	Plantings	SFT	2000	15.00	30,000
25	Trees	EA	60	400.00	24,000
26	Storm Sewer	LFT	700	30.00	21,000
27	Storm Sewer Inlet, Rework	EA	12	1,500.00	18,000
28	Maintenance of Traffic	LS	1	2,500.00	2,500
29	Signage (general sheet)	EA	20	350.00	7,000
30	Signs, Project	EA	1	2,500.00	2,500
31	Bench, Metal	EA	2	1,500.00	3,000
32	Line, Paint, Solid, Red, 4"	LFT	1939	1.25	2,424
33	Symbols/Markings	EA	8	300.00	2,400
34	Bicycle Racks	EA	2	250.00	500
35	Concrete Drive Approach	SYS	725	80.00	58,000
36	Curb & Gutter	LFT	1467	12.00	17,604
37	Concrete Class A (Poured Walls/Stairs)	CYS	2	750.00	1,500
38	Railing (stairs)	LFT	20	100.00	2,000
				Subtotal	664,004
				Design Engineering	66,400
				Construction Management	99,601
				Survey	9,644
				Subtotal	839,649
				Contingency (10%)	66,400
				Total	**$906,050**

Section 16: South Park

Cost: $ 1,200,615 (2011 dollars)

Length: ~ 0.45 miles (~2,349 linear feet) of trails

16. South Park

a. Setting Description

Section 16 is located at South Park, an underutilized park located adjacent to SR 57 on the south side of Washington. The park contains two basketball courts, two softball fields, a soccer field, a playground, a shelter house and restroom facilities. Ample parking is available on the south side of the park. There are no existing sidewalks within the park boundary.

b. Project Description

This section of trail encircles the entire park boundary.

The South Park playground.

Two sections of the trail system connect to South Park: Section 15 enters from the east while Section 17 enters from the northwest corner of the park. South Park will be considered as a trailhead due to its ample available parking and facilities.

Section 16: South Park

The trail will cross just north of the wooden fence line, providing drivers with ample sight distance.

There will be approximately 0.45 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 18. A detailed engineer's rendering of this section can be found in Exhibit 13 in Appendix B.

c. Additional Improvements

To improve the appearance of the park, additional landscaping should be done. The cost of additional landscaping was included in the estimate.

Creating a safe crossing area over SR 57 to link with Section 17 was very important to the design of this section. From the intersection of SR 57 and Meridian, SR 57 curves and travels uphill past South Park. This location was chosen because it provided the best sight distance for approaching drivers. Traffic on SR 57 tends to move over the speed limit at this location so traffic calming mechanisms should be put in place. The city, with the approval of INDOT, may want to consider constructing a pedestrian island, bump-outs and/or a raised crosswalk. Placement of appropriate signage will also be needed.

d. Potential Challenges

The entire trail in Section 16 is on city property, therefore, there are no anticipated issues with obtaining adequate right-of-way.

Table 18: Section 16 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 16 - SOUTH PARK MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	16,500.00	16,500
2	Mobilization and Demobilization	LS	1	41,000.00	41,000
3	Clearing Right-of-Way/Site Clearing	LS	1	20,000.00	20,000
4	Special Subgrade Treatment	SYS	2567	4.00	10,268
5	Excavation, Common	CYS	4198	10.00	41,980
6	Finish Grading	SFT	87,648	0.15	13,147
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,000.00	15,000
9	Compacted Aggregate for Base No. 53	TON	2008	25.00	50,200
10	HMA Surface, Type A	TON	212	95.00	20,140
11	HMA Intermediate, Type A	TON	636	85.00	54,060
12	Sidewalk, Concrete 5" (colored/textured)	SYS	26	60.00	1,560
13	Sidewalk, Concrete, Plain Broom Finish	SYS	33	40.00	1,320
14	HMA Patching	TON	3.5	200.00	700
15	Walkway Edging	LFT	4514	8.00	36,112
16	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
17	Fertilizer	TON	0.8	950.00	760
18	Seed Mixture	LBS	500	3.00	1,500
19	Mulching Material	TON	4	400.00	1,600
20	Sodding, Nursery	SYS	9738	3.50	34,083
21	Topsoil	CYS	74	40.00	2,960
22	Mulch, Hardwood Shredded Bark	CYS	25	65.00	1,625
23	Plantings	SFT	222	15.00	3,330
24	Trees	EA	50	400.00	20,000
25	Storm Sewer	LFT	1000	30.00	30,000
26	Storm Sewer Inlet, Rework	EA	10	1,500.00	15,000
27	Maintenance of Traffic	LS	1	2,500.00	2,500
28	Signage (general sheet)	EA	12	350.00	4,200
29	Signs, Project	EA	1	2,500.00	2,500
30	Bench, Metal	EA	4	1,500.00	6,000
31	Line, Paint, Solid, Red, 4"	LFT	2700	1.25	3,375
32	Bicycle Racks	EA	6	250.00	1,500
33	Parking Lot Paving	SYS	4087	100.00	408,700
34	Pavement Markings	LFT	2700	1.50	4,050
35	Symbols/Markings	EA	5	300.00	1,500
36	Curb & Gutter (parking lot)	LFT	1100	12.00	13,200
				Subtotal	882,470
				Design Engineering	88,247
				Construction Management	132,371
				Survey	9,280
				Subtotal	1,112,368
				Contingency (10%)	88,247
				Total	**$1,200,615**

Section 17: Meridian Street / First Street Connector Summary

Cost: $ 970,188 (2011 dollars)

Length: ~ 0.45 miles (~2,352 linear feet) of trails

17. Meridian Street / First Street Connector - South Park to Wilson Street

a. Setting Description

Section 17 connects South Park to the residential areas located to the west. The majority of this area (Between Highland Ave, SR 57 and Meridian Street) can be characterized as very hilly. Existing sidewalks are located along Meridian Street and a portion of 1st Street. Sidewalk conditions in this area vary from excellent to poor.

The trail will be located between the fence line and the carwash.

b. Project Description

This section begins south of the Super Wash (car washing business), west of SR 57. The trail travels

Section 17: Meridian Street / First Street Connector - South Park to Wilson Street

Looking north along Meridian Street.

west, up and over a hill, along the north side of the fence line that separates the Pines Apartment Complex and the residences on Darnell Drive and La Rue Court. As the trail moves downhill, the trail forks as it approaches Meridian Street. The south fork crosses Meridian Street and connects to Section 18, eventually leading trail users to Wal-Mart. The north fork continues on the east side of Meridian Street until the trail transitions to the north side of Highland Avenue, heading in a westerly direction. A retaining wall will be located in the area of the fork in the trail. A fence line will be constructed surrounding the retaining wall for safety purposes. The trail transitions to the north once it crosses over 1st Street, remaining on the west side of the street until the section terminates at the intersection of 1st Street and Wilson Street.

There will be approximately 0.45 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 19. A detailed engineer's rendering of this section can be found in Exhibit 14 in Appendix B.

c. Additional Improvements

Crosswalks should be striped where the trail crosses over Meridian Street to join with Section 18 and around the intersection of Highland Avenue and Meridian Street. Creating a safe crossing area over SR 57 to link with Section 16 was very important to the design of this section. From the intersection of SR 57 and Meridian, SR 57 curves and travels uphill past South Park. This location was chosen because it provided the best sight distance for approaching drivers. Traffic on SR 57 tends to move over the speed limit at this location so traffic calming mechanisms should be put in place. The city, with the approval of INDOT, may want to consider constructing a pedestrian island, bump-outs and/or a raised crosswalk. Placement of appropriate signage will also be needed.

d. Potential Challenges

The trail contains steep slopes, between Meridian Street, SR 57 and Highland Avenue, that may make it difficult to abide by the ADA requirements. Obtaining adequate right-of-way along 1st Street, Highland Avenue and the area between Meridian Street and SR 57 may be challenging and will require the granting of multiple easements.

Table 19: Section 17 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 17 - MERIDIAN / FIRST CONNECTOR SOUTH PARK TO WILSON STREET MARCH 17, 2011					
Item	Pay Item	Unit	QTY	Unit Cost	Total Cost
1	Construction Engineering	LS	1	13,500.00	13,500
2	Mobilization and Demobilization	LS	1	33,100.00	33,100
3	Clearing Right-of-Way/Site Clearing	LS	1	50,000.00	50,000
4	Special Subgrade Treatment	SYS	1918	4.00	7,672
5	Excavation, Common	CYS	2530	10.00	25,300
6	Finish Grading	SFT	29,984	0.15	4,498
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,000.00	15,000
9	Compacted Aggregate for Base No. 53	TON	1405	25.00	35,125
10	HMA Surface, Type A (Trail)	TON	158	95.00	15,010
11	HMA Intermediate, Type A (trail)	TON	475	85.00	40,375
12	Sidewalk, Concrete 5" (colored/textured)	SYS	222	60.00	13,320
13	Sidewalk, Concrete, Plain Broom Finish	SYS	296	40.00	11,840
14	HMA Patching	TON	149	200.00	29,800
15	Walkway Edging	LFT	3472	8.00	27,776
16	Pavement Markings	LFT	521	1.50	782
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.3	950.00	285
19	Seed Mixture	LBS	175	3.00	525
20	Mulching Material	TON	1.4	400.00	560
21	Sodding, Nursery	SYS	3331	3.50	11,659
22	Topsoil	CYS	44	40.00	1,760
23	Mulch, Hardwood Shredded Bark	CYS	14	65.00	910
24	Plantings	SFT	1181	15.00	17,715
25	Trees	EA	48	400.00	19,200
26	Storm Sewer	LFT	900	30.00	27,000
27	Storm Sewer Inlet, Rework	EA	20	1,500.00	30,000
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	16	350.00	5,600
30	Signs, Project	EA	1	2,500.00	2,500
31	Bench, Metal	EA	2	1,500.00	3,000
32	Line, Paint, Solid, Red, 4"	LFT	1500	1.25	1,875
33	Symbols/Markings	EA	7	300.00	2,100
34	Bicycle Racks	EA	2	250.00	500
35	Concrete Drive Approach	SYS	224	80.00	17,920
36	HMA Widening	TON	86	150.00	12,900
37	Curb & Gutter	LFT	2036	12.00	24,432
38	Concrete Class A (Poured Walls/Stairs)	CYS	2	750.00	1,500
39	Railing (stairs)	LFT	12	100.00	1,200
40	Walls (Modular)	SFT	4257	15.00	63,855
41	Wall Erection	SFT	4257	15.00	63,855
42	Structure Backfill, Modular Wall	CYS	788	30.00	23,640
43	Railing (retaining wall)	LFT	280	150.00	42,000
44	48" Chain Link Type Fence	LFT	240	25.00	6,000
				Subtotal	712,688
				Design Engineering	71,269
				Construction Management	106,903
				Survey	8,060
				Subtotal	898,920
				Contingency (10%)	71,269
				Total	$970,188

Section 18: Wal-Mart Connector - Spencer Street to Wal-Mart Summary

Cost: $ 2,403,043 (2011 dollars)

Length: ~ 1.10 miles (~ 5,787 linear feet) of trails

18. Wal-Mart Connector - Spencer Street to Wal-Mart

a. Setting Description

Section 18 will connect the major commercial area surrounding the SR 57/US 50 corridor to the city. The majority of this section of trail is located outside of the city limits. Sidewalks only exist between Spencer Street and Burris Street, however it is very common to see pedestrians and bicyclists traveling along the shoulder of SR 57 to reach Wal-Mart and its surrounding businesses. Although the speed limit is only 45 mph (miles per hour), drivers tend to reach speeds that are much higher.

Steep grade approaching Wal-Mart

b. Project Description

This section of trail begins on the west side of Meridian Street, south of Spencer Street. The trail travels southward, eventually merging onto SR 57 until it passes the small strip mall located south of W 150 S. The trail begins to wind westward until it reaches the parking lot of Wal-Mart.

Section 18: Wal-Mart Connector - Spencer Street to Wal-Mart

There will be approximately 1.10 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 20. A detailed engineer's rendering of this section can be found in Exhibit 15 and Exhibit 16 in Appendix B.

c. Additional Improvements

No additional improvements have been identified.

d. Potential Challenges

The city will have to work closely with the INDOT, Daviess County, and local residential and commercial land owners to obtain adequate right-of-way to accommodate the trail. The steep hill between Wal-Mart and the strip mall may make it difficult to abide by the ADA requirements.

Table 20: Section 18 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 18 - WALMART CONNECTOR SPENCER STREET TO WALMART MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	33,000.00	33,000
2	Mobilization and Demobilization	LS	1	84,000.00	84,000
3	Clearing Right-of-Way/Site Clearing	LS	1	60,000.00	60,000
4	Special Subgrade Treatment	SYS	6593	4.00	26,372
5	Excavation, Common	CYS	6044	10.00	60,440
6	Finish Grading	SFT	95,097	0.15	14,265
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	30,000.00	30,000
9	Compacted Aggregate for Base No. 53	TON	4607	25.00	115,175
10	HMA Surface, Type A	TON	559	95.00	53,105
11	HMA Intermediate, Type A	TON	952	85.00	80,920
12	Sidewalk, Concrete 5" (colored/textured)	SYS	465	60.00	27,900
13	Sidewalk, Concrete, Plain Broom Finish	SYS	286	40.00	11,440
14	HMA Patching	TON	640	200.00	128,000
15	Walkway Edging	LFT	12311	8.00	98,488
16	Pavement Markings	LFT	582	1.50	873
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	1	950.00	950
19	Seed Mixture	LBS	945	3.00	2,835
20	Mulching Material	TON	4.5	400.00	1,800
21	Sodding, Nursery	SYS	10010	3.50	35,035
22	Topsoil	CYS	185	40.00	7,400
23	Mulch, Hardwood Shredded Bark	CYS	61	65.00	3,965
24	Plantings	SFT	5000	15.00	75,000
25	Trees	EA	120	400.00	48,000
26	Storm Sewer	LFT	5900	40.00	236,000
27	Storm Sewer - Inlet Rework	EA	30	1,500.00	45,000
28	Maintenance of Traffic	LS	1	3,000.00	3,000
29	Signage (general sheet)	EA	40	350.00	14,000
30	Signs, Project	EA	2	2,500.00	5,000
31	Bench, Metal	EA	4	1,500.00	6,000
32	Line, Paint, Solid, Red, 4"	LFT	5900	1.25	7,375
33	Bicycle Racks	EA	2	250.00	500
34	Curb & Gutter	LFT	6993	12.00	83,916
35	Concrete Drive approach	SYS	3002	80.00	240,160
36	Symbols/Markings	EA	10	300.00	3,000
37	Walls (Modular)	SFT	2070	15.00	31,050
38	Wall Erection	SFT	2070	15.00	31,050
39	Structure Backfill, Modular Wall	CYS	1840	30.00	55,200
				Subtotal	1,762,314
				Design Engineering	176,231
				Construction Management	264,347
				Survey	23,920
				Subtotal	2,226,812
				Contingency (10%)	176,231
				Total	**$2,403,043**

Section 19: First / Dewey / Sixth Connector Summary

Cost: $ 1,546,005 (2011 dollars)

Length: ~ 0.26 miles (~1,364 linear feet) of trails
~ 0.83 miles (~4,361 linear feet) of bike lanes

19. First / Dewey / Sixth Connector - Wilson Street to US 50 Commercial Center

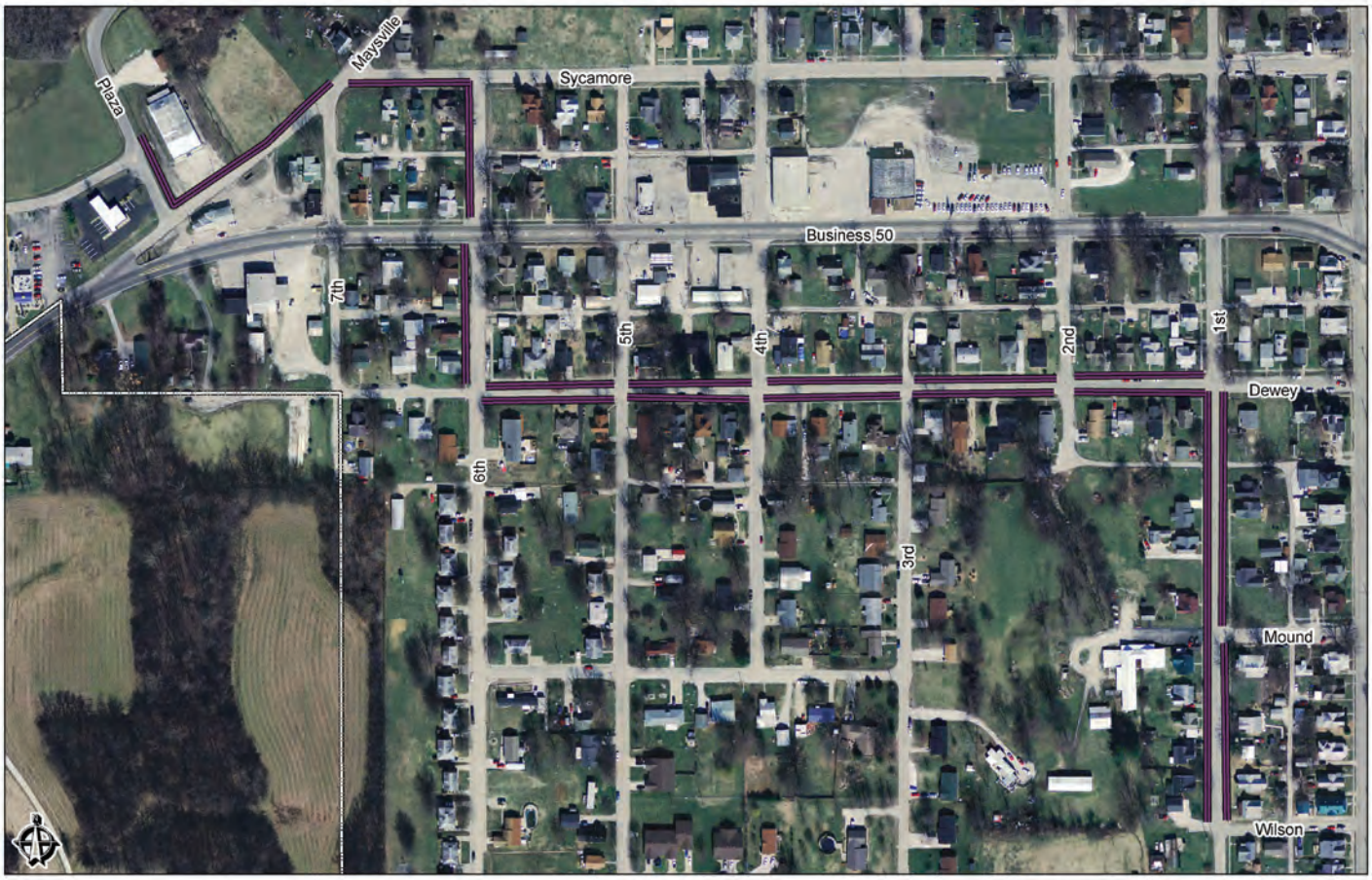
a. Setting Description

Section 19 provides the necessary link that will eventually connect neighborhoods in southwest Washington to commercial areas located around Business 50 and the downtown area. Sidewalks exist along Dewey Avenue and a portion of 1st Street, 6th Street, and Sycamore Street. Existing sidewalks in this area vary in condition, from excellent to poor.

This section crosses Business 50 at 6th Street. Currently, Business 50 is used as the primary east/west entrance into the city. Traffic volumes and speeds on Business 50 between Maysville Road and SE 2nd Street have made it difficult for pedestrians and bicyclists to cross. Additional safety measures will need to be taken upon the completion of the construction of the I-69 interchange, which will result in a further intensification of traffic volumes on Business 50. The *Feasibility Study for Business 50 and Commercial/Industrial Development Sites (June 2010)* has identified other road improvements that will be needed for the Business 50 corridor.

b. Project Description

This section begins at the intersection of Wilson Street and 1st Street by transitioning from a trail to bike lanes, two one-way pairs located on each side of 1st Street. The trail continues north until it veers westward on to Dewey Avenue. The trail continues to be two one-way pair bike lanes until the west side of 6th Street, where the trail converts back into a trail and heads northward. The trail will continue northward, over Business 50, until



Section 19: First / Dewey / Sixth Connector - Wilson Street to US 50 Commercial Center

Dewey Street.

it reaches Sycamore Street. From Sycamore the trail travels westward, eventually crossing Maysville Road, where it follows the road to the southwest. At Plaza Drive the trail shifts northward until it passes the entrance into the shopping center where this section terminates.

There will be approximately 0.26 miles of trail and 0.83 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 21. A detailed engineer's rendering of this section can be found in Exhibit 17 in Appendix B.

c. Additional Improvements

Traffic calming measures should be considered at the intersection of 6th Street and Business 50. First, a crosswalk (raised or striped) should be created to make the area more visible to approaching drivers. Second, the city should consider adding a pedestrian island or bump-outs to reduce the amount of time a pedestrian/ bicyclist is in the drive-able roadway. Finally, the city should consider adding more visible signage (complete with flashing lights) to alert drivers of the impending crossing area. Because Business 50 is considered a state road, all improvements to this area must be done so with the permission of INDOT.

Additional crosswalks should be striped at the east side entrance (off of Plaza Drive) to the shopping center.

d. Potential Challenges

Adequate right-of way appears to be available on Dewey Avenue and 1st Street to accommodate the bike lanes; however other locations of the trail still need to be determined. Easements will need to be granted if these areas lack available right-of-way.

Table 21: Section 19 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 19 - FIRST / DEWEY / SIXTH CONNECTOR WILSON STREET TO BUSINESS 50 COMMERCIAL CENTER MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	21,000.00	21,000
2	Mobilization and Demobilization	LS	1	53,000.00	53,000
3	Clearing Right-of-Way/Site Clearing	LS	1	100,300.00	100,300
4	Special Subgrade Treatment	SYS	1661	4.00	6,644
5	Excavation, Common	CYS	5492	10.00	54,920
6	Finish Grading	SFT	50,847	0.15	7,627
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	18,500.00	18,500
9	Compacted Aggregate for Base No. 53	TON	3484	25.00	87,100
10	HMA Surface, Type A (Trail)	TON	95	95.00	9,025
11	HMA Intermediate, Type A (trail)	TON	284	85.00	24,140
12	Sidewalk, Concrete 5" (colored/textured)	SYS	255	60.00	15,300
13	Sidewalk, Concrete, Plain Broom Finish	SYS	2975	40.00	119,000
14	HMA Patching	TON	444	200.00	88,800
15	Walkway Edging	LFT	2243	8.00	17,944
16	Pavement Markings	LFT	453	1.50	680
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.5	950.00	475
19	Seed Mixture	LBS	300	3.00	900
20	Mulching Material	TON	2.4	400.00	960
21	Sodding, Nursery	SYS	5649	3.50	19,772
22	Topsoil	CYS	33	40.00	1,320
23	Mulch, Hardwood Shredded Bark	CYS	11	65.00	715
24	Plantings	SFT	900	15.00	13,500
25	Trees	EA	11	400.00	4,400
26	Storm Sewer	LFT	2800	30.00	84,000
27	Storm Sewer Inlet, Rework	EA	28	1,500.00	42,000
28	Maintenance of Traffic	LS	1	5,000.00	5,000
29	Signage (general sheet)	EA	40	350.00	14,000
30	Signs, Project	EA	1	2,500.00	2,500
31	Bicycle Lane Lines	LFT	8768	5.00	43,840
32	Bench, Metal	EA	2	1,500.00	3,000
33	Line, Paint, Solid, Red, 4"	LFT	1400	1.25	1,750
34	Symbols/Markings	EA	20	300.00	6,000
35	Bicycle Racks	EA	2	250.00	500
36	Concrete Drive Approach	SYS	753	80.00	60,240
37	HMA widening	TON	611	150.00	91,650
38	Curb & Gutter	LFT	6140	12.00	73,680
39	Concrete Class A (Poured Walls/Stairs)	CYS	3	750.00	2,250
40	Walls (Modular)	SFT	1025	15.00	15,375
41	Wall Erection	SFT	1025	15.00	15,375
42	Structure Backfill, Modular Wall	CYS	152	30.00	4,560
				Subtotal	1,133,841
				Design Engineering	113,384
				Construction Management	170,076
				Survey	15,320
				Subtotal	1,432,621
				Contingency (10%)	113,384
				Total	**$1,546,005**

Section 20: South Third Street Connector Summary

Cost: $ 1,445,224 (2011 dollars)

Length: ~ 1.11 miles (~5,832 linear feet) of bike lanes

20. South Third Street Connector - Main Street to Dewey Avenue

a. Setting Description

Section 20 connects downtown to the neighborhoods located in southeast Washington. Existing sidewalks can be found throughout this section; however, their condition varies making some areas difficult for bicyclists, roller-bladers and the handicapped to use.

Southside Avenue.

b. Project Description

This section consists of two one-way pair bike lanes. The bike lanes begin at the intersection of Dewey Avenue and travel east until Meridian Street, where it briefly

Section 21: South Third Street Connector - Main Street to Dewey Avenue

Third Street railroad crossing.

heads south before returning to an easterly direction on Southside Avenue. Once the bike lanes pass the Washington Towers and reaches 3rd Street, the lanes begin a northward journey into downtown Washington. The bike lanes cross Business 50 at an area that already contains traffic signals. Between Oak Street and Harned Avenue, the bike lanes cross rail road tracks, requiring special safety mechanisms such as a turnstyle or a gate. This section terminates at Main Street, blending into the newly constructed sidewalks built during the Downtown Revitalization Project completed in 2010.

There will be approximately 1.11 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 22. A detailed engineer's rendering of this section can be found in Exhibit 18 in Appendix B.

c. Additional Improvements

Crosswalks should be made more visible where 3rd Street crosses at Main Street, South Street and Business 50.

d. Potential Challenges

Additional permits are require for the portion of trail crossing the railroad tracks. Since this can be a lengthy process, the permit should be pursued prior to seeking funding for this section.

Table 22: Section 20 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 20 - SOUTH THIRD STREET CONNECTOR MAIN STREET TO DEWEY AVENUE MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	19,300.00	19,300
2	Mobilization and Demobilization	LS	1	48,200.00	48,200
3	Clearing Right-of-Way/Site Clearing	LS	1	98,300.00	98,300
4	Special Subgrade Treatment	SYS	3320	4.00	13,280
5	Excavation, Common	CYS	4181	10.00	41,810
6	Finish Grading	SFT	25,500	0.15	3,825
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	30,000.00	30,000
9	Compacted Aggregate for Base No. 53	TON	2237	25.00	55,925
10	Sidewalk, Concrete, Plain Broom Finish	SYS	2143	40.00	85,720
11	HMA Patching	TON	443	200.00	88,600
12	HMA Widening	TON	832	150.00	124,800
13	Curb & Gutter	LFT	6051	12.00	72,612
14	Pavement Markings	LFT	1373	1.50	2,060
15	Bicycle Lane Lines	LFT	11964	5.00	59,820
16	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
17	Fertilizer	TON	0.3	950.00	285
18	Seed Mixture	LBS	150	3.00	450
19	Mulching Material	TON	0.3	400.00	120
20	Sodding, Nursery	SYS	2832	3.50	9,912
21	Topsoil	CYS	22	40.00	880
22	Mulch, Hardwood Shredded Bark	CYS	7	65.00	455
23	Plantings	SFT	600	15.00	9,000
24	Storm Sewer	LFT	3000	30.00	90,000
25	Storm Sewer Inlets, Rework	EA	30	1,500.00	45,000
26	Maintenance of Traffic	LS	1	2,500.00	2,500
27	Signage (general sheet)	EA	30	350.00	10,500
28	Signs, Project	EA	1	2,500.00	2,500
29	Bench, Metal	EA	2	1,500.00	3,000
30	Line, Paint, Solid, Red, 4"	LFT	3000	1.25	3,750
31	Symbols/Markings	EA	22	300.00	6,600
32	Bicycle Racks	EA	2	250.00	500
33	Concrete Drive Approach	SYS	1160	80.00	92,800
34	Rail Crossing	SFT	654	10.00	6,540
35	Rail Signals	LS	1	30,000.00	30,000
				Subtotal	1,061,144
				Design Engineering	106,114
				Construction Management	159,172
				Survey	12,680
				Subtotal	1,339,109
				Contingency (10%)	106,114
				Total	**$1,445,224**

Section 21: North Third Street Connector Summary

Cost: $ 793,124(2011 dollars)

Length: ~ 0.25 miles (~1,314 linear feet) of trails
~ 0.21 miles (~1,098 linear feet) of bike lanes

21. North Third Street Connector - Main Street To Maple Street

Future trail location located east of the Daviess County Courthouse.

a. Setting Description

Section 21 connects the downtown area to neighborhoods located north of the city center. This section also provides a link to Washington Catholic High School, YMCA, City Hall, Daviess County Courthouse and Section 3, which leads to North Elementary School.

b. Project Description

This section begins at the intersection of Main Street and 3rd Street as two one-way pair bike lanes. Main Street recently underwent a facelift, complete with new sidewalks, lighting and benches. The addition of the bike lanes will complement the revitalization project. The bike lanes will not reduce the number of parking spaces currently available along the west side of 3rd Street between Main Street and Walnut Street or the east side of 3rd Street, between Van Trees Street and Walnut Street.

Section 21: North Third Street Connector - Main Street to Maple Street

From Main Street, the bike lanes travel north two blocks before transitioning into a trail located on the west side of 3rd Street. The trail continues north until it reaches Maple Street, where it will tie into Section 3.

There will be approximately 0.25 miles of trail and 0.21 miles of bike lanes constructed in this section. An estimate of costs associated with this project is located in Table 23. A detailed engineer's rendering of this section can be found in Exhibit 19 in Appendix B.

c. Additional Improvements

No additional improvements have been identified.

d. Potential Challenges

The city and Daviess County own the majority of the right-of-way between Main Street and Hefron Street. Right-of Way may need to be obtained along the west side of 3rd Street between Maple Street and Hefron Street.

Table 23: Section 21 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 21 - NORTH THIRD CONNECTOR MAIN STREET TO MAPLE STREET MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	11,000.00	11,000
2	Mobilization and Demobilization	LS	1	27,000.00	27,000
3	Clearing Right-of-Way/Site Clearing	LS	1	62,300.00	62,300
4	Special Subgrade Treatment	SYS	3395	4.00	13,580
5	Excavation, Common	CYS	2505	10.00	25,050
6	Finish Grading	SFT	12,981	0.15	1,947
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	13,000.00	13,000
9	Compacted Aggregate for Base No. 53	TON	1510	25.00	37,750
10	HMA Surface, Type A (trail)	TON	92	95.00	8,740
11	HMA Intermediate, Type A (trail)	TON	153	85.00	13,005
12	Sidewalk, Concrete 5" (colored/textured)	SYS	420	60.00	25,200
13	Sidewalk, Concrete, Plain Broom Finish	SYS	747	40.00	29,880
14	HMA Patching	TON	188	200.00	37,600
15	Walkway Edging	LFT	2134	8.00	17,072
16	Curb & Gutter	LFT	2555	12.00	30,660
17	Pavement Markings	LFT	606	1.50	909
18	Bicycle Lane Lines	LFT	1916	5.00	9,580
19	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
20	Fertilizer	TON	0.1	950.00	95
21	Seed Mixture	LBS	75	3.00	225
22	Mulching Material	TON	0.6	400.00	240
23	Sodding, Nursery	SYS	1442	3.50	5,047
24	Topsoil	CYS	35	40.00	1,400
25	Mulch, Hardwood Shredded Bark	CYS	12	65.00	780
26	Plantings	SFT	948	15.00	14,220
27	Storm Sewer	LFT	2220	30.00	66,600
28	Storm Sewer Inlets, Rework	EA	22	1,500.00	33,000
29	Maintenance of Traffic	LS	1	5,000.00	5,000
30	Signage (general sheet)	EA	24	350.00	8,400
31	Signs, Project	EA	1	2,500.00	2,500
32	Bench, Metal	EA	2	1,500.00	3,000
33	Line, Paint, Solid, Red, 4"	LFT	1300	1.00	1,300
34	Symbols/Markings	EA	8	300.00	2,400
35	Bicycle Racks	EA	4	250.00	1,000
36	Concrete Drive Approach	SYS	67	80.00	5,360
37	HMA Widening	TON	430	150.00	64,500
				Subtotal	581,440
				Design Engineering	58,144
				Construction Management	87,216
				Survey	8,180
				Subtotal	734,980
				Contingency (10%)	58,144
				Total	**$793,124**

Section 22: Wetland Connector Summary

Cost: $ 708,956 (2011 dollars)

Length: ~ 0.65 miles (~3,438 linear feet) of trails

22. Wetland Connector - Business 50 Commercial Center to Wetland Trail

a. Setting Description

Section 22 connects the Business 50 Commercial Center to the constructed wetland, located west of S 150 W, via the south side of Hawkins Creek. The wetland was designed to eliminate the city's sewer overflow problems and to begin the process of improving the water quality of Hawkins Creek. The wetland is the largest man-made wetland of this size in the United States.

b. Project Description

This trail section begins at the east entrance (Plaza Drive) to the Business 50 shopping center. The trail travels northward along Plaza Drive until it transitions to the west, along the south side of Hawkins Creek. The trail travels alongside Hawkins Creek until it reaches the northwest corner of the wetland, where the trail turns southward until it terminates near the southeast corner of the wetland.

There will be approximately 0.65 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 24. A detailed engineer's rendering of this section can be found in Exhibit 20 in Appendix B.

c. Additional Improvements

At a later point, the city may want to use the wetland as an ecology center. Improvements such as the addition of informational signage on wildlife and plant life, expanding trails and adding restroom facilities may be needed.

Section 22: Wetland Connector - Business 50 Commercial Center to Wetland Trail

d. Potential Challenges

Right-of-way will need to be obtained for land used on the Business 50 shopping center's land. The city purchased the remaining right-of-way for the purpose of constructing the wetland.

Table 24: Section 22 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 22 - WETLAND CONNECTOR BUSINESS 50 TO WETLAND MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	10,000.00	10,000
2	Mobilization and Demobilization	LS	1	25,000.00	25,000
3	Clearing Right-of-Way/Site Clearing	LS	1	25,000.00	25,000
4	Special Subgrade Treatment	SYS	3665	4.00	14,660
5	Excavation, Common	CYS	8187	10.00	81,870
6	Finish Grading	SFT	76,256	0.15	11,438
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	17,100.00	17,100
9	Compacted Aggregate for Base No. 53	TON	1495	25.00	37,375
10	HMA Surface, Type A	TON	302	95.00	28,690
11	HMA Intermediate, Type A	TON	504	85.00	42,840
12	Sidewalk, Concrete 5" (colored/textured)	SYS	143	60.00	8,580
13	Sidewalk, Concrete, Plain Broom Finish	SYS	30	40.00	1,200
14	HMA Patching	TON	17	200.00	3,400
15	Walkway Edging	LFT	6658	8.00	53,264
16	Pavement Markings	LFT	180	1.50	270
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.7	950.00	665
19	Seed Mixture	LBS	438	3.00	1,314
20	Mulching Material	TON	3.5	400.00	1,400
21	Sodding, Nursery	SYS	8473	3.50	29,656
22	Topsoil	CYS	74	40.00	2,960
23	Mulch, Hardwood Shredded Bark	CYS	24	65.00	1,560
24	Plantings	SFT	2000	15.00	30,000
25	Trees	EA	50	400.00	20,000
26	Storm Sewer	LFT	600	30.00	18,000
27	Storm Sewer - Inlet Rework	EA	14	1,500.00	21,000
28	Maintenance of Traffic	LS	1	3,000.00	3,000
29	Signage (general sheet)	EA	12	350.00	4,200
30	Signs, Project	EA	3	2,500.00	7,500
31	Bench, Metal	EA	2	1,500.00	3,000
32	Line, Paint, Solid, Red, 4"	LFT	3329	1.25	4,161
33	Bicycle Racks	EA	2	250.00	500
34	Curb & Gutter	LFT	135	12.00	1,620
36	Symbols/Markings	EA	6	300.00	1,800
				Subtotal	515,123
				Design Engineering	51,512
				Construction Management	77,268
				Survey	13,540
				Subtotal	657,444
				Contingency (10%)	51,512
				Total	**$708,956**

Section 23: Tenth Street Connector - Westwood Crossing to Wetland Trail Summary

Cost: $ 1,380,051 (2011 dollars)

Length: ~ 0.41 miles (~2,146 linear feet) of trails

23. Tenth Street Connector - Westwood Crossing to Wetland Trail

a. Setting Description

Section 23 connects the wetland and Business 50 shopping center to neighborhoods located on the west side of the city. This area can be characterized as mostly low- to moderate-income residential area. This section also provides a necessary link to Section 24, which connects to Lena Dunn Elementary School and Gwaltney Park. Sidewalks do exist along most of 10th Street and Downey Avenue, however they very in condition from good to poor.

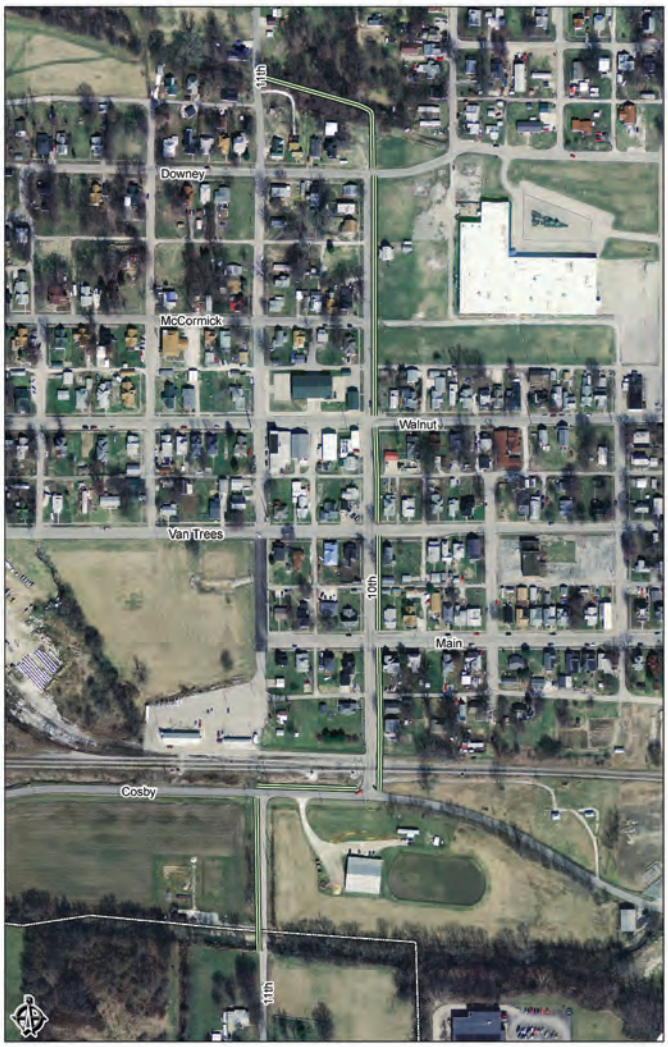
b. Project Description

This section begins with a pedestrian bridge over Hawkins Creek adjacent to the west side of 11th Street. The trail continues to travel north until it reaches the north side of Oak Street, where the trail travels east for a short distance until it transitions back to a north direction after it crosses 10th Street. The trail crosses railroad tracks between Oak Street and Main Street, requiring the addition of a turn-style or a gate. The trail continues north until it passes Downey Avenue, at which point the trail begins to travel along an old rail bed in a northwest direction. The trail continues in this direction until it reaches 11th Street and the entrance to the Westwood Crossing housing development.

There will be approximately 0.41 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 25. A detailed engineer's rendering of this section can be found in Exhibit 21 in Appendix B.

c. Additional Improvements

Crosswalks should be painted at many of the intersections, especially the intersection of Walnut Street and 10th Street.



Section 23: Tenth Street Connector - Westwood Crossing to Wetland Trail

Stormsewer improvements are anticipate for this section. These costs have been added into the cost estimate.

d. Potential Challenges

It is unclear if the railway company has turned over property rights for the abandoned railway to adjacent property owners north of Downey Avenue. A preliminary assessment of available right-of-way showed that the city will have an adequate amount of space required for the trail along 10th Street, 11th Street (near Hawkins Creek) and Oak Street. However this assessment should be clarified prior to construction.

Additional permits are required for the portion of trail crossing the railroad tracks. Since this can be a lengthy process, the permit should be pursued prior to seeking funding for this section.

Table 25: Section 23 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 23 - TENTH STREET CONNECTOR WESTWOOD CROSSING TO WETLAND TRAIL MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	19,000.00	19,000
2	Mobilization and Demobilization	LS	1	47,000.00	47,000
3	Clearing Right-of-Way/Site Clearing	LS	1	33,800.00	33,800
4	Special Subgrade Treatment	SYS	2707	4.00	10,828
5	Excavation, Common	CYS	2985	10.00	29,850
6	Finish Grading	SFT	42,646	0.15	6,397
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	13,000.00	13,000
9	Compacted Aggregate for Base No. 53	TON	1697	25.00	42,425
10	HMA Surface, Type A (Trail)	TON	223	95.00	21,185
11	HMA Intermediate, Type A (trail)	TON	372	85.00	31,620
12	Sidewalk, Concrete 5" (colored/textured)	SYS	352	60.00	21,120
13	Sidewalk, Concrete, Plain Broom Finish	SYS	87	40.00	3,480
14	HMA Patching	TON	177	200.00	35,400
15	Walkway Edging	LFT	5397	8.00	43,176
16	Pavement Markings	LFT	742	1.50	1,113
17	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
18	Fertilizer	TON	0.4	950.00	380
19	Seed Mixture	LBS	245	3.00	735
20	Mulching Material	TON	2	400.00	800
21	Sodding, Nursery	SYS	4738	3.50	16,583
22	Topsoil	CYS	37	40.00	1,480
23	Mulch, Hardwood Shredded Bark	CYS	12	65.00	780
24	Plantings	SFT	1000	15.00	15,000
25	Storm Sewer	LFT	2590	30.00	77,700
26	Storm Sewer (Ditch)	LFT	500	60.00	30,000
27	Storm Sewer Inlet, Rework	EA	32	1,500.00	48,000
28	Storm Sewer - Headwall	LS	1	4,000.00	4,000
29	Maintenance of Traffic	LS	1	5,000.00	5,000
30	Signage (general sheet)	EA	30	350.00	10,500
31	Signs, Project	EA	1	2,500.00	2,500
32	Bench, Metal	EA	2	1,500.00	3,000
33	Line, Paint, Solid, Red, 4"	LFT	2600	1.25	3,250
34	Symbols/Markings	EA	12	300.00	3,600
35	Bicycle Racks	EA	2	250.00	500
36	Concrete Drive Approach	SYS	3783	80.00	302,640
37	Curb & Gutter	LFT	2338	12.00	28,056
38	Pedestrian Bridge	LFT	30	1,500.00	45,000
39	Railings	LFT	60	200.00	12,000
40	Railroad Crossing	LS	1	30,000.00	30,000
41	Railroad Signals	LS	1	10,000.00	10,000
				Subtotal	1,012,998
				Design Engineering	101,300
				Construction Management	151,950
				Survey	12,504
				Subtotal	1,278,751
				Contingency (10%)	101,300
				Total	**$1,380,051**

Section 24: Lena Dunn Elementary School Summary

Cost: $ 679,822 (2011 dollars)

Length: ~ 0.47 miles (~2,485 linear feet) of trails

24. Lena Dunn Elementary School - Gwaltney Park to Westwood Crossing

Lena Dunne Elementary School playground.

Section 24: Lena Dunn Elementary School - Gwaltney Park to Westwood Crossing

a. Setting Description

Section 24 connects Lena Dunn Elementary School to Longfellow Park, Gwaltney Park and neighborhoods south of the school. Surrounding this section, roadways are fairly narrow and there are very few existing sidewalks. A recent Safe Routes to School Grant provided funding for the construction of sidewalks around Greenwood Street, Front Street, 13th Street and 11th Street. The four-foot-wide walkways were built prior to the development of this plan and will not be wide enough to accommodate the trail.

b. Project Description

The trail begins on the north side of Maxwell Avenue, across from the entrance to Westwood Crossing. The trail briefly travels to the east until heads north towards the elementary school along 12th Street. After the trail crosses Cherry Street and enters onto school grounds the trail forks. The first fork heads west and connects to the sidewalks located along 13th Street. The second fork heads east briefly until it transitions to the north alongside the new sidewalks on 11th Street. The trail continues north along 11th Street until it reaches Wykoff Lane, where the trail travels east to connect to the north side of Longfellow Park. This section of trail terminates across the street from the southwest corner of Gwaltney Park.

There will be approximately 0.47 miles of trail constructed in this section. An estimate of costs associated with this project is located in Table 26. A detailed engineer's rendering of this section can be found in Exhibit 22 in Appendix B.

After-school traffic along 11th Street.

c. Additional Improvements

Stormwater drainage improvement along the route will be required. These costs have been added into the cost summary.

Crosswalks and appropriate trail crossing signage should be added at the intersection of 13th Street and Maxwell Avenue.

Student drop-off and pick-up times at the school cause traffic problems along 11th Street. The city may want to consider turning 11th Street, between Wykoff Lane and Maxwell Avenue, into a one-way (southbound) road with signage on the east side stating “No Stopping or Parking”. This would prevent students from needing to cross the road to reach awaiting cars on the east side of the road.

d. Potential Challenges

Adequate right-of-way appears to be lacking around Maxwell Avenue and 12th Street. Easements will be needed at these locations.

Table 26: Section 24 Summary Opinion of Probable Cost

SUMMARY OPINION OF PROBABLE COST SECTION 24 - LENA DUNN ELEMENTARY SCHOOL GWALTNEY PARK TO WESTWOOD CROSSING MARCH 17, 2011					
Item	**Pay Item**	**Unit**	**QTY**	**Unit Cost**	**Total Cost**
1	Construction Engineering	LS	1	8,800.00	8,800
2	Mobilization and Demobilization	LS	1	22,000.00	22,000
3	Clearing Right-of-Way/Site Clearing	LS	1	20,000.00	20,000
4	Special Subgrade Treatment	SYS	2877	4.00	11,508
5	Excavation, Common	CYS	6703	10.00	67,030
6	Finish Grading	SFT	93,047	0.15	13,957
7	Temporary Construction Entrance/Exit	LS	1	1,500.00	1,500
8	Erosion Control Admin/Maintenance	LS	1	15,300.00	15,300
9	Compacted Aggregate for Base No. 53	TON	1171	25.00	29,275
10	HMA Surface, Type A	TON	216	95.00	20,520
11	HMA Intermediate, Type A	TON	360	85.00	30,600
12	HMA Patching	TON	52	200.00	10,400
13	Sidewalk, Concrete 5" (colored/textured)	SYS	233	60.00	13,980
14	Sidewalk, Concrete, Plain Broom Finish	SYS	219	40.00	8,760
15	Mobilization and Demobilization for Seeding, Sodding and Landscaping	LS	1	600.00	600
16	Fertilizer	TON	0.84	950.00	798
17	Seed Mixture	LBS	525	3.00	1,575
18	Mulching Material	TON	4.2	400.00	1,680
19	Sodding, Nursery	SYS	7236	3.50	25,326
20	Topsoil	CYS	130	40.00	5,200
21	Mulch, Hardwood Shredded Bark	CYS	43	65.00	2,795
22	Plantings	SFT	3506	15.00	52,590
23	Trees	EA	70	400.00	28,000
24	Storm Sewer	LFT	600	30.00	18,000
25	Storm Sewer Inlet, Rework	EA	2	1,500.00	3,000
26	Maintenance of Traffic	LS	1	2,500.00	2,500
27	Signage (general sheet)	EA	20	350.00	7,000
28	Signs, Project	EA	1	2,500.00	2,500
29	Bench, Metal	EA	2	1,500.00	3,000
30	Line, Paint, Solid, Red, 4"	LFT	3059	1.25	3,824
31	Bicycle Racks	EA	2	250.00	500
32	Concrete Drive Approach	SYS	148	80.00	11,840
33	Curb & Gutter	LFT	455	12.00	5,460
34	Walkway Edging	LFT	4879	8.00	39,032
35	Pavement Markings	LFT	240	1.50	360
36	Concrete Class A (Poured Walls/Stairs)	CYS	4	750.00	3,000
37	Symbols/Markings	EA	7	300.00	2,100
				Subtotal	494,310
				Design Engineering	49,431
				Construction Management	74,146
				Survey	12,504
				Subtotal	630,391
				Contingency (10%)	49,431
				Total	**$679,822**

CHAPTER 5 RECOMMENDATIONS

A. IMPLEMENTATION OF THE FIVE E'S

As discussed in the Introduction Chapter, thoroughly addressing the Five's E's (Engineering, Education, Encouragement, Enforcement, and Evaluation) is essential to a successful SRTS Program. Implementation of the Five E's will most likely be done in concurrence of one another. The recommendations section will provide the guidance needed to address remaining elements of the Five E's.

1. Engineering

Steps to implement the Engineering portion of the Five E's have already begun with the completion of this plan. The Trail Design Chapter provides the final layout of the system and identifies other improvements necessary to create safer conditions for walking and biking. However, to construct the trails and make other improvements, funding will be required.

a. Funding Opportunities

To acquire enough funding for the entire $30.2 million dollar at one time would be difficult. The trail system was broken into multiple sections in the SRTS Plan for the purpose of obtaining funding in more attainable amounts. Recent funding made available through Federal grant programs for trail and sidewalk initiatives come in a variety of increments, ranging from just a few thousand dollars to around a million dollars. These funding sources include the Safe Routes to School (SRTS) Program, the Transportation Enhancement (TE) Activities Program, and the Congestion Mitigation and Air Quality Improvement Program (CMAQ).

Many communities have begun redirecting small increments of their transportation funding, once used solely for road improvements, to support the further growth of their SRTS Program. For example, Portland, Oregon has developed 300 miles of trails and bike lanes in the last 15 years at a cost of one percent of their total transportation budget.

Throughout the country, local health organizations, hospitals, local businesses, non-profit organizations and volunteers have begun to show interest in the SRTS Program by sponsoring SRTS events or sections of trail, as well as donating supplies, time and money to the cause.

Communities have created various fundraisers to promote their trail system and to earn the necessary funds needed for the construction of a trail section and enhance the appearance of the trail system (lighting, signage, benches, etc.). These include raffling off donated items, selling plaques that will be mounted onto light posts or benches, and an adopt-a-trail program. The City of Wamego, Kansas created a fundraising campaign form that was mailed to every resident and business in their community. The two-sided form provided information regarding the history of the project, a description of the trail system and an explanation on why the construction of the trail system is important to the health of the community. The form also provided a number of donation levels. An example of this form can be seen in Figure 8 and Figure 9.

b. Prioritization of the Trail Sections

The trail sections have not been prioritized in this document. The order in which the segments will be constructed will most likely be influenced by available funding. Requirements for eligibility are different for each grant; therefore, not every section will be eligible for a particular grant. For example, some grants require that the trail must connect an elementary school to a neighborhood while others require that the trail be built as part of a complete streets initiative.

In a perfect world, where funding does not dictate the order in which the trail system is constructed in, the trails would be constructed with the sections closest to the elementary schools first, followed by the sections located within and around the local parks, and finally, the sections that serve as connectors.

c. Additional Engineering Recommendations

In reality, the trail system cannot connect to every residence in Washington; however, the city can continue to build their sidewalk network by continuing to promote the city's 50/50 sidewalk program. This program reimburses residents up to 50 percent of the cost to construct a sidewalk on the resident's property. Details can be found by contacting the Mayor's office.

The city may also want to consider maintaining an inventory of sidewalks, including accurate information on the sidewalk conditions. This may help the city prioritize sidewalk rehabilitation efforts in the future.

2. Education and Encouragement

Educational activities and events can furnish the knowledge necessary to identify safety issues and provide the skills to cope with them. Many of the educational activities are not only created to address safety issues but to also promote the concept of healthy living and the continuing development of the trails. The city, with the help of the schools and other interested residents, should begin with some of the educational and promotional activities discussed in the Education & Encouragement Chapter.

One of the most important education elements to be completed prior to the construction of the trail system is the process of removing barriers. Although physical barriers, like restriping crosswalks and adding signage, will be completed during the Engineering element, non-physical barriers should be addressed fully during the educational stage. This effort can begin by the removal or improvement of policies that do not currently support the SRTS initiative.

The lack of bike racks is often seen as a barrier to a trail system. The city should consider contacting local businesses and encourage them to place bike racks in front of their buildings.

Starting an informational campaign is also recommended. This would provide information on how the city plans to remove existing barriers, how the city hopes to fund the project, how the trail systems will affect the health of the community among other types of information. This can be done through mailers or perhaps through the media.

Finally, each school should consider providing an SRTS informational packet to students prior to the first day of school. The packet would contain a reminder of safety precautions students will need to take when walking or biking to school, a map containing highlighted areas that are considered “safe” routes to school, a list of rules to abide by when walking, biking, etc. to school (No skateboards allowed in the classroom, bikes must be chained at a bike rack at a certain location, student release times). This packet may also contain promotional information for new SRTS activities that will be done throughout the school year.

Some communities have sponsored a “walking/biking” rally to promote their trail system. This event would be done after one or two concurrent sections of trail were completed. The event might consist of a stage with a live band, booths supporting different SRTS activities, sponsor booths maintained by local businesses (like bicycle shops) or the police department. Participants of this event should be encouraged to walk or bike to the event.

3. Enforcement

Prior to the construction of the trail system, the city should consider working with local crossing guards and the police department to discuss expectations for enforcing safety rules that influence driver and pedestrian/bicyclist behavior. The city may want to also include a list of these rules in any informational campaign they choose to carry out.

Some communities have used enforcement as a mechanism to provide funding for the construction of future trail sections, for improving signage and the development of a driver education program. Historically, this has been done through the proceeds gained from speeding tickets.

The city may want to consider adopting two policies. The first would be a complete streets policy, which will ensure that future roads will be constructed in a manner that can accomodate multiple modes of transportation. The second policy would require developers to construct sidewalks in new subdivisions.

4. Evaluation

The National Center for Safe Routes to School has created surveys to help quantify the success of SRTS Programs across the nation. This survey is required once a year for any project that receives funding through

the Safe Routes to School grant program administered through INDOT. The city should consider expanding their evaluation methods beyond this standard school survey to include trail users of all ages. This may be done through performing a count of trail users on each trail segment, similar to the way traffic counts are done on roadways. This quantifiable analysis will help promote the success of the trail system and may lead to more funding opportunities to be used for the construction of future trail sections.

The city should consider establishing a goal for the completion of the trail system, like “We are stiving to ensure that every City of Washington resident lives within a quarter-mile of the trail system by 2025.” The chosen goal can continued to be measured through the use of Geographical Infomation Systems. Once the trail system is complete, the city may consider refocusing their attention to rehabilitating existing walkways or creating new walkways that provide connections to the trail system.

FUNDRAISING CAMPAIGN FORM

SUPPORT IT. BUILD IT. ENJOY IT.

Your tax-deductible donation to support the WAM-SAG-MAN Trail Project can be made by writing your check to "Wamego Community Foundation" with a note "Recreational Trail Fund". The Wamego Community Foundation is a 501c(3) nonprofit foundation. Visit www.thewcf.org for more information. Contributions made through the Foundation are tax-deductible to the maximum extent allowed by law.

Mail this form and your check or credit card payment to:
Wamego Community Foundation
Recreational Trail Fund
P.O. Box 25
Wamego, KS 66547

Your Name/Company Name _____
(Please list company name or your name as you would like it to appear)

Address _____

City, State, ZIP _____

Contact Person _____

Telephone _____

E-mail _____

Make checks payable to Wamego Community Foundation or charge:

___ VISA ___ MasterCard ___ Discover (3.5% fee to use credit card)

Acct# _____ Exp. Date ___/___

Signature _____ Date _____

SUPPORT LEVEL	AMOUNT		
Mile Sponsor	$250,000		_____
½ Mile Sponsor	$125,000		_____
¼ Mile Sponsor	$62,500		_____
Timber Foot Bridge	$25,000		_____
Rest Area Sponsor	$5,000-$9,999		_____
Tree Sponsor Level II	$1000		_____
Tree Sponsor Level I	$500		_____
Buy a foot of trail	($100 per foot)	____ feet X $100 =	_____
		TOTAL	_____

SUPPORT IT. BUILD IT. ENJOY IT.

BUY IT BY THE FOOT SUPPORTER: > $100
- Income tax receipt

TREE LEVEL I SUPPORTER: $500
- Income tax receipt
- Personalized recognition certificate suitable for framing
- Choice of select tree species

TREE LEVEL II SUPPORTER: $1000
- Income tax receipt
- Personalized recognition certificate suitable for framing
- Choice of select tree species
- Donor(s) name permanently inscribed on a plaque at the base of the tree

REST AREA SUPPORTER: $5,000 - $9,999
- Income tax receipt
- Personalized recognition certificate suitable for framing
- Donor's name(s) permanently inscribed on rest area plaque

TIMBER FOOT BRIDGE SUPPORTER: $25,000
- Income tax receipt
- Personalized recognition certificate suitable for framing
- Donor(s) name engraved on plaque attached to bridge

1/4 MILE SUPPORTER: $62,500
- Income tax receipt
- Naming rights for ¼ mile marker
- Specially framed trail certificate

1/2 MILE SUPPORTER: $125,000
- Income tax receipt
- Naming rights for ½ mile marker
- Specially framed trail certificate

MILE SUPPORTER: $250,000
- Income tax receipt
- Naming rights for mile marker
- Specially framed trail certificate

WAM-SAG-MAN TRAIL
connecting communities

WAM-SAG-MAN TRAIL
connecting communities

wamego
saint george
manhattan

Figure 8: Wam-Sag-Man Fundraiser Campaingn Form Example Page One

Figure 9: Wam-Sag-Man Fundraiser Campaingn Form Example Page Two

THE HISTORY

WAM-SAG-MAN Trail will connect the communities of Wamego, Saint George and Manhattan. A partnership between the Wamego Chamber of Commerce, Pottawatomie County Economic Development, the Pottawatomie County Outdoor Recreation Council and a group of trail advocates has been created for the project. Together we are working to raise funds to build the trail through several phases. This trail will provide safe passage for bicyclists, joggers, walkers and anyone else enjoying the outdoors.

Local residents of the area appreciate the scenic views and historical richness of the region. The WAM-SAG-MAN Trail will embrace and exemplify these treasures. The trail also will reinforce the progressive nature of the community, as well as enhance the quality of life for current and future residents.

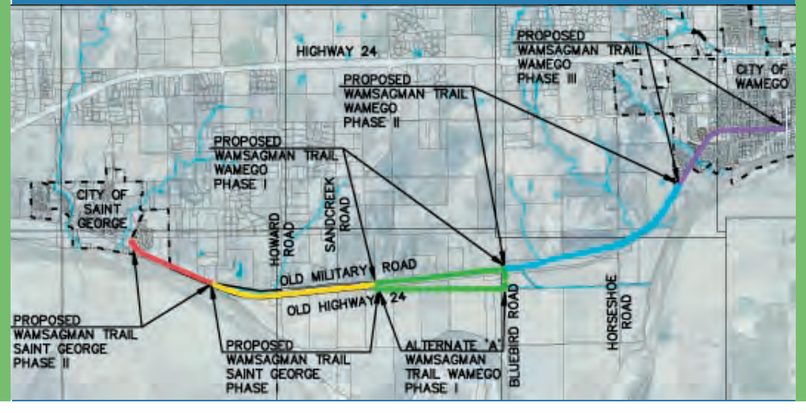
FOR MORE INFORMATION, CONTACT POTTAWATOMIE COUNTY ECONOMIC DEVELOPMENT CORPORATION AT:
1004 Lincoln
Wamego, KS 66547
Phone: (785) 456-9776
E-mail: Brandi Brenigar, brandi@ecodevo.com; or Diane Novak, novakd@scicablecom.com

THE PROJECT

The Recreation Trail project started in 2001 when the Wamego Chamber of Commerce and an ad hoc tourism committee hosted a Visioning Session to define future goals for tourism and recreation in Wamego and the surrounding area. Two projects stood out: A recreational trail from Wamego to Saint George and a new river landing in Wamego.

In 2002, the Recreational Trail and River Landing projects were adopted into the Wamego Chamber's strategic plan. In 2003, Pottawatomie County Economic Development Corp. adopted both projects into its strategic plan, and in 2005 included both in their tourism plan. In August 2005, a draft of the Scope of Services was prepared that projected what would be necessary to conduct the engineering and cost feasibility study for the project. Students in K-State's PLAN 761 Community Development Workshop class conducted the feasibility and design study in spring 2006. Landplan Engineering completed the preliminary engineering design and probable construction costs in spring 2007.

THE TRAIL ROUTE



WHY IS IT NEEDED?

This trail will eliminate the need for its user having to share the busy roads with motor vehicle traffic. Having the trail will make our communities stronger and healthier. It will provide a safe place for children and families to exercise together, and walk and bicycle to school and work.

County right-of-way will be utilized for the trail between Saint George and Wamego, which is why this portion of the trail is being developed before the area west of Saint George. Portions of this area will include original bridges from old US 40 Highway from 1928. The trail will be 10-foot wide, two-directional and concrete since it requires less maintenance.

Our fundraising program is underway thanks to money raised from bicycle rides, individual gifts and grants. In order to provide you with the entire story of this exciting project, we have developed this brochure for your enjoyment and review. Please pay special attention to the area available to mark your contribution. Your tax-deductible donation will help us establish the WAM-SAG-MAN Trail so future generations will be able to reap the benefits as well. We look forward to completing this project with your help. See you on the trail!

APPENDIX A

Walkability Checklist
and
Bikeability Checklist

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.

U.S. Department of Transportation Federal Highway Administration

U.S. Department of Transportation National Highway Traffic Safety Administration

United States Environmental Protection Agency

SafeRoutes National Center for Safe Routes to School

Pedestrian and Bicycle Information Center

Take a walk and use this checklist to rate your neighborhood's walkability.

How walkable is your community?

Location of walk

Rating Scale: 1 awful · 2 many problems · 3 some problems · 4 good · 5 very good · 6 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) **1 2 3 4 5 6**

Locations of problems: _____

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) **1 2 3 4 5 6**

Locations of problems: _____

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) **1 2 3 4 5 6**

Locations of problems: _____

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) **1 2 3 4 5 6**

Locations of problems: _____

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) **1 2 3 4 5 6**

Locations of problems: _____

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!

Now that you've identified the problems, go to the next page to find out how to fix them.

Now that you know the problems, you can find the answers.

Improving your community's score

1. Did you have room to walk?

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

Need some guidance? These resources might help...

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.dot.gov/people/injury/pedbimot/pedSAFE

SIDEWALK ACCESSIBILITY INFORMATION

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

U.S. Department of Transportation Federal Highway Administration
U.S. Department of Transportation National Highway Traffic Safety Administration
SafeRoutes National Center for Safe Routes to School
Pedestrian and Bicycle Information Center

Bikeability Checklist

How bikeable is your community?

Riding a bike is fun!

Bicycling is a great way to get around and to get your daily dose of physical activity. It's good for the environment, and it can save you money. No wonder many communities are encouraging people to ride their bikes more often!

Can you get to where you want to go by bike?

Some communities are more bikeable than others: how does yours rate? Read over the questions in this checklist and then take a ride in your community, perhaps to the local shops, to visit a friend, or even to work. See if you can get where you want to go by bicycle, even if you are just riding around the neighborhood to get some exercise.

At the end of your ride, answer each question and, based on your opinion, circle an overall rating for each question. You can also note any problems you encountered by checking the appropriate box(es). Be sure to make a careful note of any specific locations that need improvement.

Add up the numbers to see how you rated your ride. Then, turn to the pages that show you how to begin to improve those areas where you gave your community a low score. Before you ride, make sure your bike is in good working order, put on a helmet, and be sure you can manage the ride

U.S. Department of Transportation
National Highway Traffic Safety Administration

Pedestrian and Bicycle Information Center

U.S. Department of Transportation
Federal Highway Administration

Go for a ride and use this checklist to rate your neighborhood's bikeability.

How bikeable is your community?

Location of bike ride (be specific):

Rating Scale:

1. Did you have a place to bicycle safely?

a) On the road, sharing the road with motor vehicles?

☐ Yes ☐ Some problems (please note locations):

- ☐ No space for bicyclists to ride
- ☐ Bicycle lane or paved shoulder disappeared
- ☐ Heavy and/or fast-moving traffic
- ☐ Too many trucks or buses
- ☐ No space for bicyclists on bridges or in tunnels
- ☐ Poorly lighted roadways

Other problems:

_____

_____

b) On an off-road path or trail, where motor vehicles were not allowed?

☐ Yes ☐ Some problems:

- ☐ Path ended abruptly
- ☐ Path didn't go where I wanted to go
- ☐ Path intersected with roads that were difficult to cross
- ☐ Path was crowded
- ☐ Path was unsafe because of sharp turns or dangerous downhills
- ☐ Path was uncomfortable because of too many hills
- ☐ Path was poorly lighted

Other problems:

_____

_____

Overall "Safe Place To Ride" Rating: (circle one)

1 2 3 4 5 6

2. How was the surface that you rode on?

☐ Good ☐ Some problems, the road or path had:

- ☐ Potholes
- ☐ Cracked or broken pavement
- ☐ Debris (e.g. broken glass, sand, gravel, etc.)
- ☐ Dangerous drain grates, utility covers, or metal plates
- ☐ Uneven surface or gaps
- ☐ Slippery surfaces when wet (e.g. bridge decks, construction plates, road markings)
- ☐ Bumpy or angled railroad tracks
- ☐ Rumble strips

Other problems:

_____

_____

Overall Surface Rating: (circle one)

1 2 3 4 5 6

3. How were the intersections you rode through?

☐ Good ☐ Some problems:

- ☐ Had to wait too long to cross intersection
- ☐ Couldn't see crossing traffic
- ☐ Signal didn't give me enough time to cross the road
- ☐ Signal didn't change for a bicycle
- ☐ Unsure where or how to ride through intersection

Other problems:

_____

_____

Overall Intersection Rating: (circle one)

1 2 3 4 5 6

Continue the checklist on the next page...

4. Did drivers behave well?

☐ Good ☐ Some problems, drivers:

- ☐ Drove too fast
- ☐ Passed me too close
- ☐ Did not signal
- ☐ Harassed me
- ☐ Cut me off
- ☐ Ran red lights or stop sign

Other problems:

_____

_____

Overall Driver Rating: (circle one)

1 2 3 4 5 6

5. Was it easy for you to use your bike?

☐ Good ☐ Some problems:

- ☐ No maps, signs, or road markings to help me find my way
- ☐ No safe or secure place to leave my bicycle at my destination
- ☐ No way to take my bicycle with me on the bus or train
- ☐ Scary dogs
- ☐ Hard to find a direct route I liked
- ☐ Route was too hilly

Other problems:

_____

_____

Overall Intersection Rating: (circle one)

1 2 3 4 5 6

6. What did you do to make your ride safer?

Your behavior contributes to the bikeability of your community. Check all that apply:

- ☐ Wore a bicycle helmet
- ☐ Obeyed traffic signal and signs
- ☐ Rode in a straight line (didn't weave)
- ☐ Signaled my turns
- ☐ Rode with (not against) traffic
- ☐ Used lights, if riding at night
- ☐ Wore reflective and/or retroreflective materials and bright clothing
- ☐ Was courteous to other travelers (motorist, skaters, pedestrians, etc.)

7. Tell us a little about yourself.

In good weather months, about how many days a month do you ride your bike?

- ☐ Never
- ☐ Occasionally (one or two)
- ☐ Frequently (5-10)
- ☐ Most (more than 15)
- ☐ Every day

Which of these phrases best describes you?

- ☐ An advanced, confident rider who is comfortable riding in most traffic situations
- ☐ An intermediate rider who is not really comfortable riding in most traffic situations
- ☐ A beginner rider who prefers to stick to the bike path or trail

How does your community rate?

Add up your ratings and decide.

(Questions 6 and 7 do not contribute to your community's score)

1. _____	**26–30**	Celebrate! You live in a bicycle-friendly community.
2. _____	**21–25**	Your community is pretty good, but there's always room for improvement.
3. _____	**16–20**	Conditions for riding are okay, but not ideal. Plenty of opportunity for improvements.
4. _____	**11–15**	Conditions are poor and you deserve better than this! Call the mayor and the newspaper right away.
5. _____	**5–10**	Oh dear. Consider wearing body armor and Christmas tree lights before venturing out again.

Total: _____

Did you find something that needs to be changed?

On the next page, you'll find suggestions for improving the bikeability of your community based on the problems you identified. Take a look at both the short- and long-term solutions and commit to seeing at least one of each through to the end. If you don't, then who will?

During your bike ride, how did you feel physically? Could you go as far or as fast as you wanted to? Were you short of breath, tired, or were your muscles sore? The next page also has some suggestions to improve the enjoyment of your ride.

Bicycling, whether for transportation or recreation, is a great way to get 30 minutes of physical activity into your day. Riding, just like any other activity, should be something you enjoy doing. The more you enjoy it, the more likely you'll stick with it. Choose routes that match your skill level and physical activities. If a route is too long or hilly, find a new one. Start slowly and work up to your potential.

Now that you know the problems, you can find the answers.

Improving your community's score

1. Did you have a place to bicycle safely?	What you and your child can do immediately	What you and your community can do with more time
a) On the road?		
No space for bicyclists to ride (e.g. no bike lane or shoulder; narrow lanes) Bicycle lane or paved shoulder disappeared Heavy and/or fast-moving traffic Too many trucks or buses No space for bicyclists on bridges or in tunnels Poorly lighted roadways	• pick another route for now • tell local transportation engineers or public works department about specific problems; provide a copy of your checklist • find a class to boost your confidence about riding in traffic	• participate in local planning meetings • encourage your community to adopt a plan to improve conditions, including a network of bike lanes on major roads • ask your public works department to consider "Share the Road" signs at specific locations • ask your state department of transportation to include paved shoulders on all their rural highways • establish or join a local bicycle advocacy group
b) On an off-road path or trail?		
Path ended abruptly Path didn't go where I wanted to go Path intersected with roads that were difficult to cross Path was crowded Path was unsafe because of sharp turns or dangerous downhills Path was uncomfortable because of too many hills Path was poorly lighted	• slow down and take care when using the path • find an on-street route • use the path at less crowded times • tell the trail manager or agency about specific problems	• ask the trail manager or agency to improve directional and warning signs • petition your local transportation agency to improve path/roadway crossings • ask for more trails in your community • establish or join a "Friends of the Trail" advocacy group
2. How was the surface you rode on?		
Potholes Cracked or broken pavement Debris (e.g. broken glass, sand, gravel, etc.) Dangerous drain grates, utility covers, or metal plates Uneven surface or gaps Slippery surfaces when wet (e.g. bridge decks, construction plates, road markings) Bumpy or angled railroad tracks Rumble strips	• report problems immediately to public works department or appropriate agency • keep your eye on the road/path • pick another route until the problem is fixed (and check to see that the problems are fixed) • organize a community effort to clean up the path	• participate in local planning meetings • encourage your community to adopt a plan to improve conditions, including a network of bike lanes on major roads • ask your public works department to consider "Share the Road" signs at specific locations • ask your state department of transportation to include paved shoulders on all their rural highways • establish or join a local bicycle advocacy group
3. How were the intersections you rode through?		
Had to wait too long to cross intersection Couldn't see crossing traffic Signal didn't give me enough time to cross the road The signal didn't change for a bicycle Unsure where or how to ride through intersection	• pick another route for now • tell local transportation engineers or public works department about specific problems • take a class to improve your riding confidence and skills	• ask the public works department to look at the timing of the specific traffic signals • ask the public works department to install loop-detectors that detect bicyclists • suggest improvements to sightlines that include cutting back vegetation; building out the path crossing; and moving parked cars that obstruct your view • organize community-wide, on-bike training on how to safely ride through intersections

Improving your community's score

(continued)

4. Did drivers behave well?	What you and your child can do immediately	What you and your community can do with more time
Drivers: Drove too fast Passed me too close Did not signal Harassed me Cut me off Ran red lights or stop signs	• report unsafe drivers to the police • set an example by riding responsibly; obey traffic laws; don't antagonize drivers • always expect the unexpected • work with your community to raise awareness to share the road	• ask the police department to enforce speed limits and safe driving • encourage your department of motor vehicles to include "Share the Road" messages in driver tests and correspondence with drivers • ask city planners and traffic engineers for traffic calming ideas • encourage your community to use cameras to catch speeders and red light runners

5. Was it easy for you to use your bike?		
No maps, signs, or road markings to help me find my way No safe or secure place to leave my bicycle at my destination No way to take my bicycle with me on the bus or train Scary dogs Hard to find a direct route I liked Route was too hilly	• plan your route ahead of time • find somewhere close by to lock your bike; never leave it unlocked • report scary dogs to the animal control department • learn to use all of your gears!	• ask your community to publish a local bike map • ask your public works department to install bike parking racks at key destinations; work with them to identify locations • petition your transit agency to install bike racks on all their buses • plan your local route network to minimize the impact of steep hills • establish or join a bicycle user group (BUG) at your workplace

6. What did you do to make your ride safer?		
Wore a bicycle helmet Obeyed traffic signals and signs Rode in a straight line (didn't weave) Signaled my turns Rode with (not against) traffic Used lights, if riding at night Wore reflective materials and bright clothing Was courteous to other travelers (motorists, skaters, pedestrians, etc.)	• go to your local bike shop and buy a helmet; get lights and reflectors if you are expecting to ride at night • always follow the rules of the road and set a good example • take a class to improve your riding skills and knowledge	• ask the police to enforce bicycle laws • encourage your school or youth agencies to teach bicycle safety (on-bike) • start or join a local bicycle club • become a bicycle safety instructor

Need some guidance? These resources might help...

Great Resources

BICYCLING INFORMATION

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

National Center for Safe Routes to School (NCSRTS)
UNC Highway Safety Research Center
Chapel Hill, NC
http:// www.saferoutesinfo.org

STREET DESIGN AND BICYCLE FACILITIES

American Association of State Highway and Transportation Officials (AASHTO)
Washington, D.C.
http://www.aashto.org

Institute of Transportation Engineers (ITE)
Washington, D.C.
http:// www.ite.org

Association of Pedestrian and Bicycle Professionals (APBP)
Cedarburg, WI
http:// www.apbp.org

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

PATHS AND TRAILS

Rails to Trails Conservancy
Washington, DC
http:// www.railtrails.org

National Park Service (NPS)
Washington, DC
http://www.nps.gov/index.htm

Pedestrian and Bicycle Information Center

U.S. Department of Transportation
Federal Highway Administration

U.S. Department of Transportation
National Highway Traffic Safety Administration

EDUCATION AND SAFETY

National Highway Traffic Safety Administration (NHTSA)
Bicycle Safety Program, Office of Safety Programs
Washington, DC
http://www.nhtsa.gov/portal/site/nhtsa/menuitem.810acaee50c651189ca8e410dba046a0/

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

SafeKids World-wide
Washington, D.C.
http://www.safekids.org

HEALTH

Centers for Disease Control and Prevention (CDC)
Division of Nutrition and Physical Activity
Atlanta, GA
http://www.dcd.gov/nccdphp/dnpa

Centers for Disease Control and Prevention (CDC)
Childhood Injury Prevention
Atlanta, GA
http:// www.dcd.gov/ncipc

ADVOCACY GROUPS

Alliance for Biking and Walking
http://www.peoplepoweredmovaement.org

League of American Bicyclists (LAB)
http://www.bikeleague.org

National Center for Bicycling and Walking (NCBW)
http://www.bikewalk.org

FUNDING SOURCES

Transportation Enhancement Activities:
http://www.fhwa.dot.gov/environment/te/

Safe Routes to School Program:
http://safety.fhwa.dot.gov/saferoutes/

Recreational Trails Program:
http://www.fhwa.dot.gov/environment/rectrails/

National Scenic Byways Program:
http://www.bywaysonline.org/

Federal Lands Highway Program:
http://flh.fhwa.dot.gov/

APPENDIX B

Detailed Trail Section maps