

Bicycle and Pedestrian Facility Assessment

Northern Adel, Sparks, and parts of Cook County



Prepared by the Southern Georgia Regional Commission

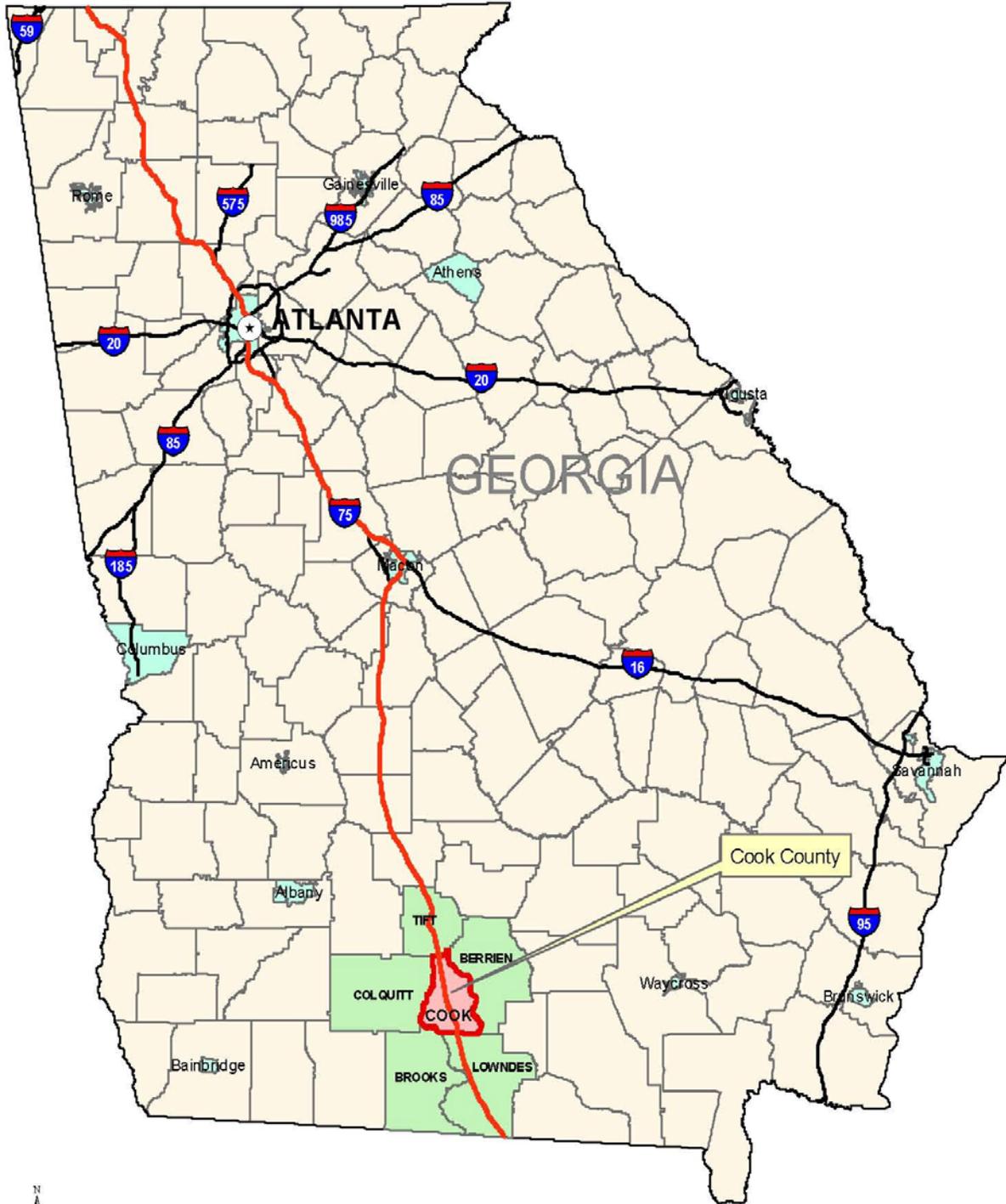
Introduction

Many automobile drivers notice bicyclists and pedestrians along the roadways, but those using the roadways for transportation who are not in a vehicle are commonly viewed as nuisances or as distractions to those driving in vehicles. These same people may even be noticing a marked increase in the numbers of people either walking or riding bicycles along the roads. For many reasons, including health issues, transportation costs, environmental concerns and many others, people are turning more to walking and riding bicycles as a form of transportation or recreation. With the increased numbers of pedestrians and cyclists along the roadways, it would be reasonable to expect higher numbers of traffic incidents involving these people, however, as the number of bicyclists and pedestrians increase, so do the safety measures and facilities designed to keep them safe.

According to the American Association of State Highway Transportation Officials (AASHTO), the organization that sets standards, publishes specifications, and tests protocols and guidelines used in highway design in the United States, "Providing safe places for people to walk is an essential responsibility of all government entities involved in constructing or regulating the construction of public rights-of-way."ⁱ This means that any government responsible for the construction or maintenance of a roadway is also responsible for providing pedestrians a safe place to walk along these roadways. How these agencies ensure the safety and ability of pedestrians to travel along the roads is dependent on the types of roads, whether it is a new construction project or a retrofit project, the cost/benefit of providing the access vs., the inherent danger, and, of course, funding availability. Federal Highway Transportation policy requires that bicycle and pedestrian facilities be incorporated into all transportation projects unless "exceptional circumstances" exist, according to a United States Department of Transportation (USDOT) policy statement on integrating walking and bicycling facilities into the transportation infrastructure.ⁱⁱ This emphasis on bicycle and pedestrian facility improvements serves to reduce traffic accidents involving those who use alternative forms of transportation, especially those incidents resulting in injury and death.

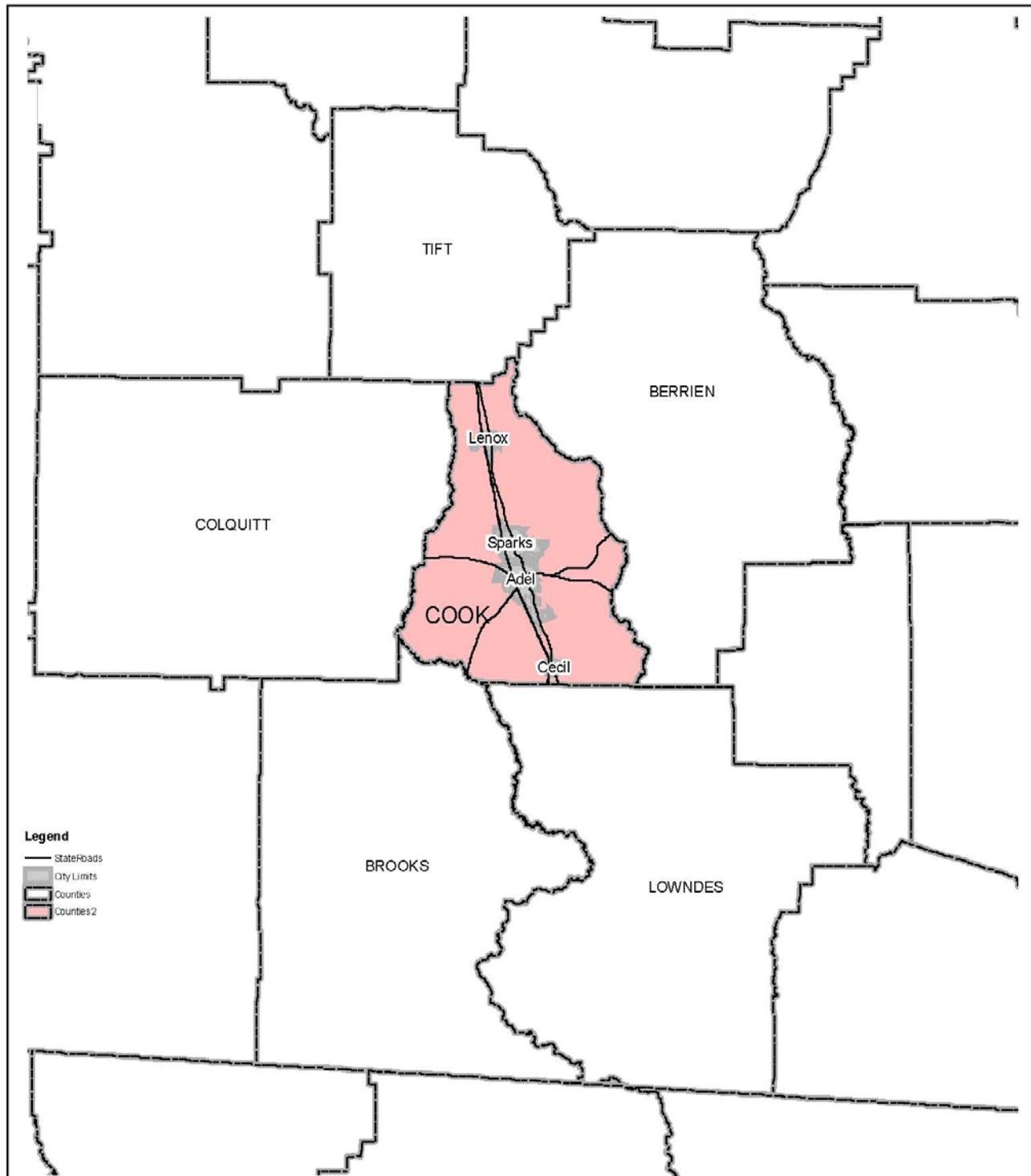
Even though there is a perceived lack of public interest in funding and increased planning efforts for bicycling and walking facilities, the FHWA states that public opinion surveys show a strong support for increased efforts to add new or improve existing bicycle and pedestrian facilities across the country.ⁱⁱⁱ With the introduction of the American's with Disabilities Act (ADA) in 1990, added emphasis was placed on the need for improved walking conditions on America's roadways, especially in regards to sidewalks, because those with disabilities rely heavily on the pedestrian and transit infrastructure for transportation. Other issues, including increases in motor fuel prices and increased emphases on environmental protection efforts, have also led to an increase in the number of Americans using non-motorized modes of transportation.

Cook County Location Map



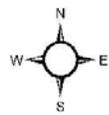
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- Legend**
- State Roads
 - City Limits
 - Counties
 - Counties 2

Source: SGRC
 Maps: Southern Georgia Regional Commission - GIS, 2010
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COOK COUNTY REGIONAL LOCATION MAP



Purpose and Scope

The purpose of this bicycle and pedestrian facility assessment is to look at a portion of Cook County with several schools, a relatively high concentration of residents and the potential for high numbers of pedestrians and bicyclists to determine what facilities are currently provided, whether the provided facilities are safe and sufficient, and whether new facilities or improvements to existing facilities are necessary. The assessment will also provide an overview of funding sources and barriers to new projects as well as other issues related to improving the ability for residents to walk or ride a bicycle safely in Cook County.

While many people recognize the importance of bicycle and pedestrian travel in urban areas, because of high population densities, high traffic, and other reasons, there is a common misconception that these modes of transportation are not major issues in rural communities. However, according to the Missouri Bicycle and Pedestrian Foundation, research actually shows that the opposite is true and that while not only common in rural communities, these areas actually need bicycling and pedestrian facilities as much, if not more, than large cities. The Foundation cites several reasons for this, including:

- Small towns are noticeably lacking facilities
- Health, fitness and obesity levels are worse in small towns than in large cities, with one reason being lack of proper facilities
- People in rural communities depend on these modes of transportation because of a lack of access to other modes, such as public transportation
- A greater portion of roadways in rural areas are State and Federally funded and State and Federal policies for transportation have, in the past, been geared towards motorized vehicles and would include bicycle and pedestrian facilities only if the local governments could fund these additions.

Even though the need is as great or greater in rural communities for bicycle and pedestrian facilities, scarce resources in these areas often means that the facilities are either insufficient or non-existent. Because State and Federal roadways generally serve as commercial corridors and city centers in rural areas, they tend to carry high volumes of vehicle traffic and have few accommodations for non-motorized transportation users. The Missouri Bicycle and Pedestrian Foundation contends that because of this poor connectivity in rural communities people choose to walk or ride a bicycle less often than they would were the facilities provided, which leads to serious consequences for public health, fitness and obesity rates in rural America. Statistics show that rural residents, including children, have higher obesity rates and are more likely to be overweight. These residents also tend to be less physically active and rural communities lack funding to add or enhance facilities to improve these conditions.

To further the problem, of all users of the roadways bicyclists and pedestrians are by far the most vulnerable to injury or death relating from accidents because they have little or no physical protection. Bicyclists are supposed to wear helmets; however, they are little protection when related to an automobile or the surface of the road. Between 1996 and

2003, nine out of ten people struck by vehicles were injured as a result, compared to one out of seven occupants of vehicles being injured as a result of a crash.^{iv} One out of every 16 pedestrians involved in a crash was killed as a result in the same time period.^v According to the same study, bicyclists are nine times more likely to be killed in crashes than are vehicle occupants.

In 2008, the most recent year of complete statistics, 716 bicyclists were killed nationwide while more than 52,000 were injured in traffic crashes. In the same year there were 4,378 pedestrian fatalities, an average of one person killed every 120 minutes and one injured every 8 minutes.^{vi} The most frequent location for both bicycle and pedestrian incidents were urban areas (69%, 72%), at non-intersection locations (64%, 76%) and after 5pm.

In Georgia between 2000-2006, according to the GDOT Crash Analysis, Statistics & Information (CASI) report, an average of three pedestrians were killed and forty injured each week. A total of 1,087 pedestrians died in this time period and one out of every 16 pedestrians involved in crashes was killed. There were 188 bicycle-related fatalities in the same period and only 22 of those who died were wearing helmets. According to the CASI report pedestrians in Georgia are “32 times more likely to be killed in motor vehicle crashes than vehicle occupants are.” In the section of the report titled “Pedestrians-Critical Issues” it is noted that a vast majority of pedestrian-related crashes occur on city streets, where almost one out of two crashes happened. Half of all bicycle crashes occurred on city streets. The main reason cited for the frequency of crashes at these locations is that “very few neighborhoods in Georgia have sidewalks or bicycle paths.” Even though a majority of both types of crashes occurred on city streets, the highest percentage of fatal crashes for both bicyclists and pedestrians occurred on state routes. According to the report, “The combination of infrequent crosswalks, no pedestrian walkways and high speed may account for the high number of fatalities on state routes.” Vehicles tend to travel faster along rural roads and people walking or riding a bicycle have fewer facilities to use, making crashes involving the two both more likely and more dangerous.

The purpose of this report is to assess the presence and condition of bicycle and pedestrian facilities in the study area. Even though this assessment does not cover all of Cook County, it is the first step in what will hopefully be a long process of evaluation and planning to make Cook County and the cities within as bicycle and pedestrian oriented as possible.

Community Profile

Cook County, GA is located along I-75 in South Central Georgia, about 120 mi. south of Macon, GA and about 30 mi. north of the Florida border. Cook County includes the City of Adel, which is the largest city and the County Seat, as well as the Cities of Sparks, Lenox and Cecil. The total population of the county according to the 2000 census is 15,771, with 5,307 of those residents residing in the City of Adel and 1,755 residing in the City of Sparks. There are 1,221 residents under the age of 5 and 2,046 over the age of 65. The median age for the county is 34.3 yrs. 3,356 people who live in Cook County are disabled.

A majority of Cook County residents, 5,299, drive alone in a vehicle to work, while the next highest percentage carpools. 123 people walk to work and 126 listed "other" as their primary mode of transportation to and from work. The county has a relatively low per capita income of \$13,465, which is only 62% of the national average of \$21,587. As of March 2010, according to the Georgia Dept. of Labor (GADOL), Cook Co. had an unemployment rate of 13.5%.

These numbers show a rural community with a large percentage of the population that is likely to walk or ride a bicycle for either transportation or recreation. These statistics also show a fairly large portion of the population having a disability, which indicates a higher probability of these residents being transit dependent or needing ADA accessibility throughout the community to be able to move from point A to point B safely. As previously mentioned, many rural areas have low rates of pedestrian and bicycle traffic, but these areas are often the most dangerous places to participate in these activities. Whether the lack of walkers and bicyclists is perceived incorrectly or whether it is a reality, there is as much, if not more, need for improved facilities in such rural areas as in more populated, urban centers.

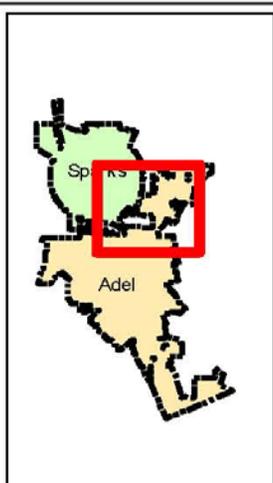
The map on the following page depicts the area being studied and labels several prominent features in the area including schools, parks, railroad crossings and pedestrian facilities. The purpose of this map is to give a broad level view of the study area while showing current pedestrian traffic generators, walking facilities and potential barriers.

This assessment covers the northeast portion of the City of Adel and extends into the City of Sparks. The area is a rough triangle with a perimeter that begins at the intersection of E. Mitchell St. and N. Elm St. and travels 1.94 miles along Mitchell St., which turns into Masee Post Rd. At the intersection of Masee Post Rd. and Patterson St. the perimeter turns and travels along Patterson St. until it intersects with US 41/Goodman St. in the City of Sparks. The area then travels south along Goodman St. and turns on Glendale St., passing Cook Elementary School and Cook Middle School, and returning to the intersection of E. Mitchell St. and Elm St. This area was chosen because of its residential population, access to recreation and shopping areas, and its proximity to several schools.

As mentioned, there are four schools located within the study area. These schools are Cook Primary School on Patterson St., the former Cook Co. High school on Mitchell St. (which is currently utilized as an alternative school and as the Horizons Academy for "challenged"

students), and Cook Middle School and Cook Elementary School which are both located on N. Elm St. There are also two parks in the area including Masee Post Rd. Park, a family park and picnic area, and the Masee Post Rd. Complex, which has several lighted fields for recreational sports activities.

According to the 2008 CASI, there were 34 pedestrian-related crashes in Cook County from 1996-2003. Of these, 29 resulted in injury and 1 resulted in death. Due to the rural nature of Cook County and the Cities of Sparks and Adel, many roads have not been properly equipped for bicycle and pedestrian travel. Large expanses between destinations and high speed limits along the rural roadways make planning for safe walking and riding a bicycle a challenge, however, because of many of the previously mentioned factors, walking and bicycling are becoming more common forms of transportation and recreation in these rural areas. Because of this it is important for communities to begin planning for increasing numbers of walkers and bicyclists on the roads.



Adel Bike/Ped Facilities Map

Legend

- RR Xing
- High School
- Middle School
- Primary Preschool
- Elementary School
- Sidewalks
- Railroad
- Study Route
- Roads
- Parcels
- Parks
- City Limits



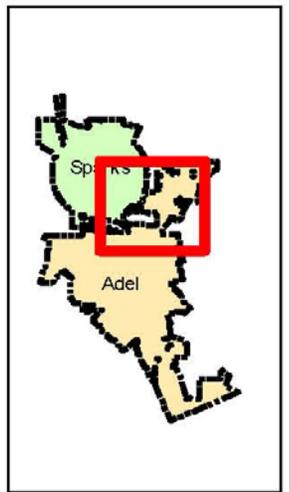
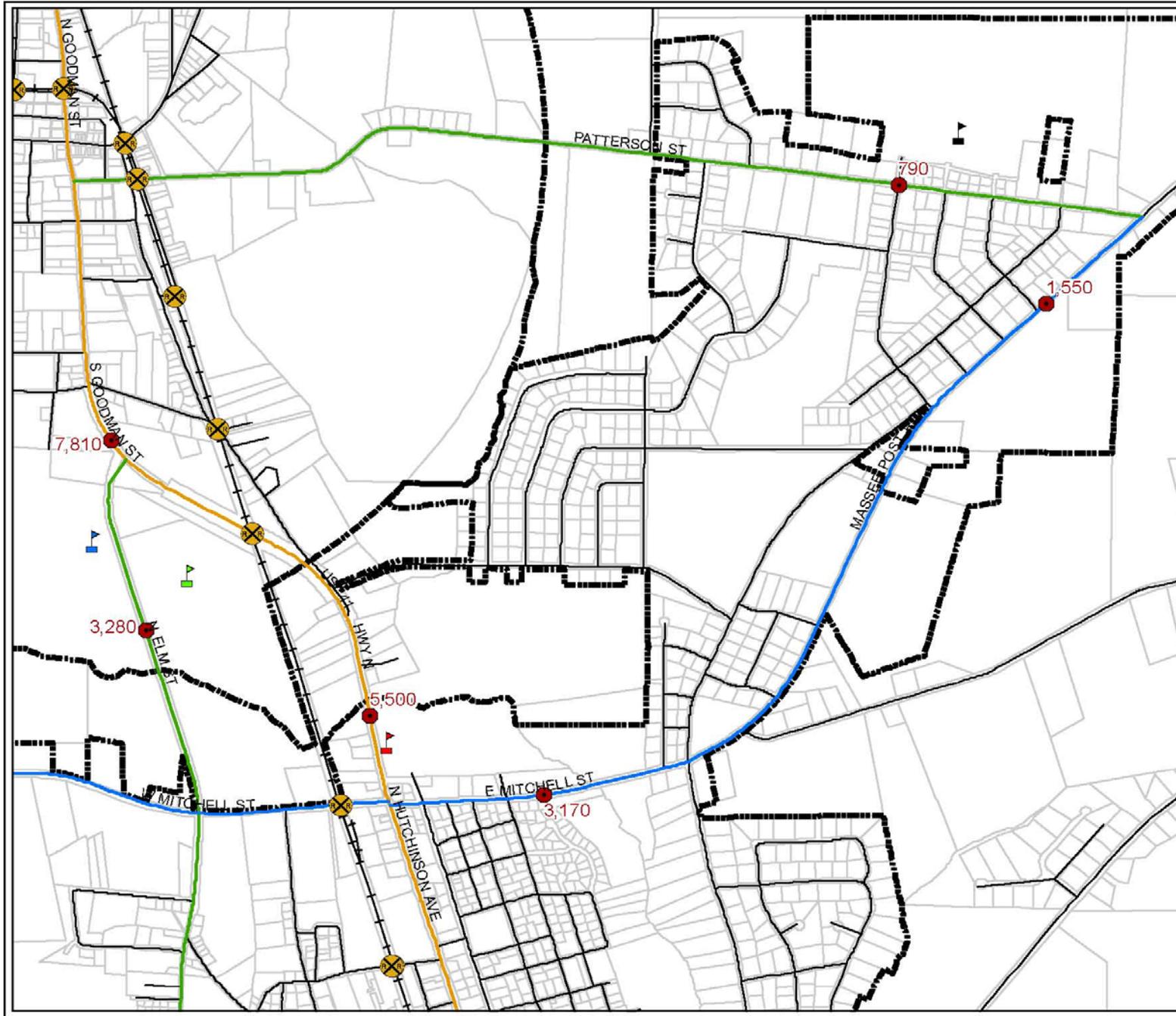
Road Network

The map on the following page shows the functional classification of roads within the study area. According to the U.S. DOT, “functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service they are intended to provide.” There are three functional classifications: arterial, collector, and local roads. All highways are grouped into one of these categories depending on the character of traffic and the degree of land access they allow. Arterial roadways provide the highest level of service at the greatest speed for the longest uninterrupted distance, while collectors provide a lower level of service at lower speeds and collect traffic from local roads and connect it with arterials.

Functional classification is a good indicator of the amount of traffic a given road is anticipated to carry as well as the speed limit ranges which will be imposed on the roadway. This system has been used extensively in the past in coordinating transportation planning with community development in general; however, as most roads designated as high capacity and high speed roadways and are designed for maximum traffic movement efficiency, the tendency has been to overlook or disregard bicycle and pedestrian needs in order to have the most effective traffic flow. This is evident in the high proportion of pedestrian-related traffic fatalities along these roadways, which can be expected as pedestrian mortality rates increase as vehicle speed increases.

As can be seen in the map, there are two arterial roadways in the study area, US Hwy 41/Goodman St./Hutchinson Ave., which runs north-south through the cities of Sparks and Adel, and Mitchell St./Massee Post Rd, which runs east-west through the City of Adel. As can be seen from the AADT counts along Goodman St., daily traffic movement is much higher along this roadway than on any other surrounding road. Traffic counters show 7,810 vehicles travel along Goodman St. north of Elm St and into the City of Sparks. As Goodman St. turns into Hutchinson Ave. in the City of Adel this number drops to 5,500 vehicles per day, which is still much higher than any other surrounding road. Traffic counts along Mitchell St. and Massee Post Rd. are not as high as those along Goodman St. and Hutchinson Ave., however, the two traffic counting stations still report 3,170 vehicles on average along Mitchell St. near the old high school and the Massee Post Rd. recreational complex, and 1,550 vehicles on average along Massee Post Rd. near Patterson St.

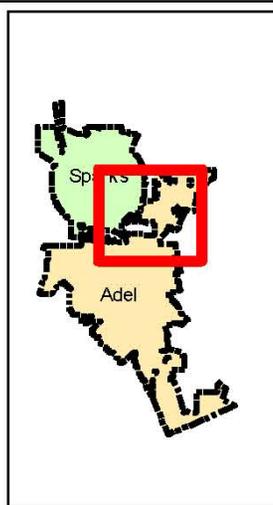
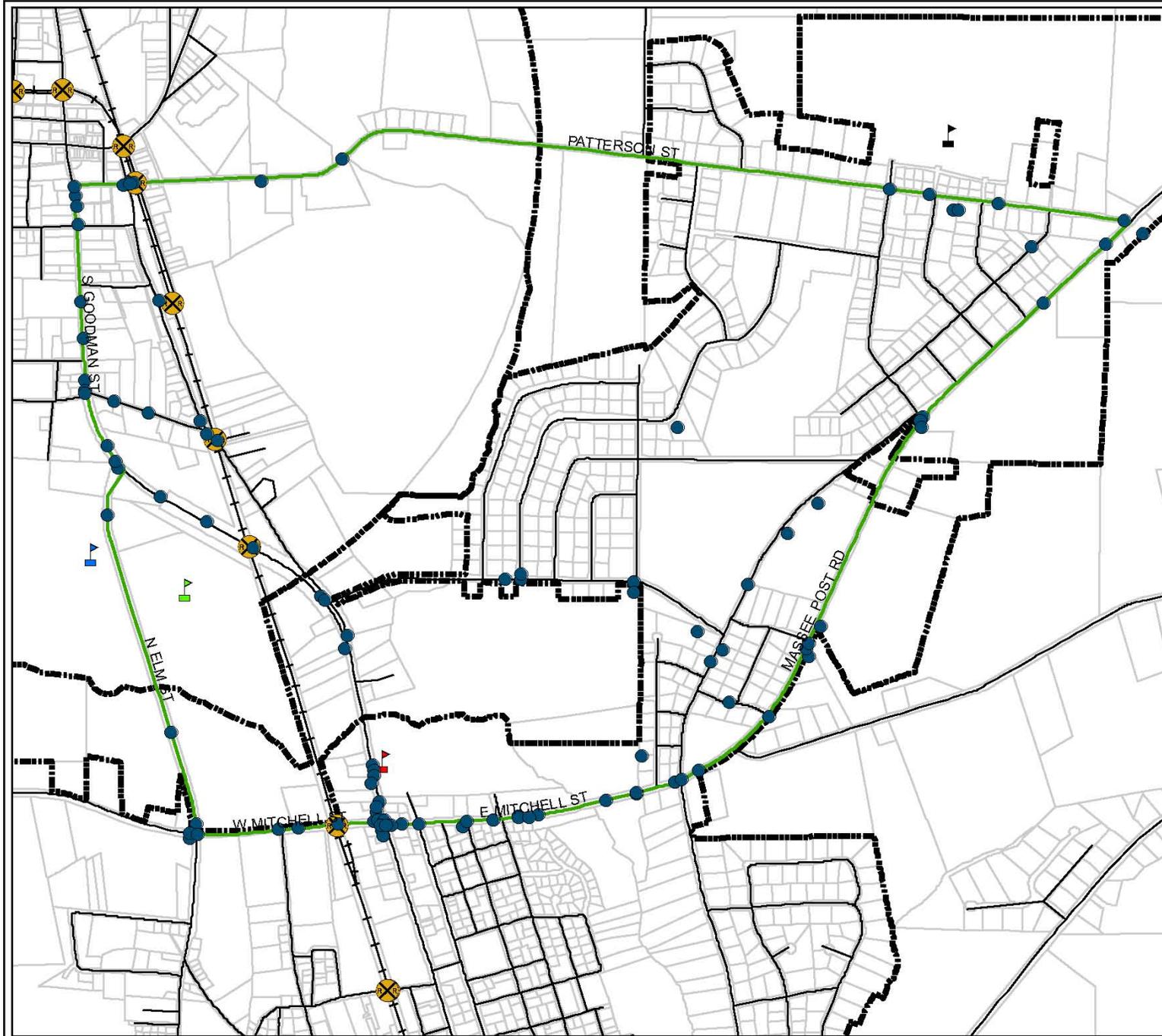
There are two roads classified as collector roads in the study area, Elm St. and Patterson St. Elm St. experiences a large majority of its vehicle traffic, which has been averaged at 3,280 vehicles per day, from drivers whose destination is one of the two schools located across the street from each other on Elm St., otherwise the traffic is generated by motorists using Elm St. as a through-way from Mitchell St. to Goodman St. Traffic along Patterson St., which sees a considerably smaller number of vehicles compared to the other major roads in the area, also experiences a fairly high portion of its traffic in relation to the primary school.



Adel Bike/Ped Functional Classifications Map

- Legend**
- GOOT Traffic Stations
 - RR Xing
 - High School
 - Middle School
 - Primary Preschool
 - Elementary School
 - Railroad
 - Rural Minor Arterial
 - Rural Minor Collector
 - Rural Principal Arterial
 - Local Roads
 - Parcels
 - City Limits



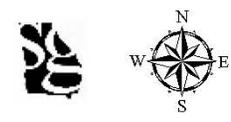


Adel

Bike/Ped

2000-2009 Crash
Location Map

- Legend**
- Crash Locations
 - RR Xing
 - High School
 - Middle School
 - Primary Preschool
 - Elementary School
 - Railroad
 - Study Route
 - Roads
 - Parcels
 - City Limits



Facility Assessment

This facility assessment was conducted to assess the bicycle and pedestrian facilities in the study area to give an overall picture of the bikeability and walkability within the area. The goal is to answer the overarching question of whether pedestrian facilities address the needs of all pedestrians. Certain pedestrian groups may be more likely to use facilities in certain areas of the community, such as students using sidewalks to access schools or recreational users attempting to access parks. If facilities are present in an area, the next goal is to determine whether the facilities provided are safe, continuous, and convenient for all users. If sidewalks are present but poorly maintained, for instance, pedestrians may take alternative routes which may put them in conflict with vehicular traffic.

The following prompts were used to assess the presence and usability of facilities on streets within the study area:

1. Presence, Design, and Placement

1. Are sidewalks provided along the street?
 - a. If there is no sidewalk, is there a walkable shoulder?
2. Are sidewalks provided on both sides of bridges?
3. Is the sidewalk adequate for pedestrian volumes?
4. Is there adequate separation between pedestrians and vehicular traffic?
5. Are sidewalks/street boundaries discernable to people with visual impairments?

2. Quality, Conditions, and Obstructions

1. Is the path clear of temporary and permanent obstructions?
2. Is the walking surface too steep?
3. Is the walking surface adequate and well-maintained?

3. Continuity and Connectivity

1. Are sidewalks/walkable shoulders continuous and on both sides of the street?
2. Are measures needed to direct pedestrians to safe crossing points and access ways?

4. Lighting

1. Is the sidewalk adequately lit?
2. Does street lighting improve pedestrian visibility at night?

5. Visibility

1. Is the visibility of pedestrians walking on the sidewalk/shoulder adequate?

6. Driveways

1. Are the conditions at driveway intersections endangering pedestrians?
2. Does the number of driveways make the route undesirable for pedestrian travel?

7. Traffic Characteristics

1. Are there any conflicts between bicycles and pedestrians?

8. Signs and Pavement Markings

1. Are pedestrian travel zones clearly delineated from other modes of traffic through the use of striping, colored and/or textured pavement, signing, and other methods?
2. Is the visibility of signs and pavement markings adequate during the day and night?

The assessment was conducted by site visits using a common set of assessment tools as provided in the FHWA “Pedestrian Road Safety and Audit Guidelines and Prompts List” (2007). FHWA’s guidance provides a full inventory assessment for streets, street crossings, parking areas and adjacent developments, and transit areas. For the purpose of this study the only tool used for all roads was the street assessment tool, because in many cases there were no other areas that applied. Some areas that had sidewalks provided were also assessed for street crossing, however there were few areas where these prompts applied.

US 41/Goodman St./Hutchinson Ave.

US 41/Goodman St./Hutchinson Ave. moves N/S and passes through the City of Sparks, into Cook County, and into the City of Adel in the study area. This is the only Rural Major collector in the area and serves as a major traffic center through both Sparks and Adel. In the City of Sparks, Goodman St. carries the highest volume of traffic of any road other than I-75. The bicycle and pedestrian facilities along Goodman St. in Sparks are the most complete of any road in the study area. The City of Sparks has sidewalks along a majority of the roads near the city center, with Goodman St. having sidewalks along its length in the City of Sparks to Alabama St. .25 mi. short of Elm St.



Along Goodman St., between Patterson St. and Alabama St., there are sidewalks located along both sides of the road. The sidewalks are in good shape, appear to be well-maintained, and they are separated from the roadway by a safe distance. There is little to no lighting provided along Goodman St. in Sparks, which is a concern for pedestrian safety. There are also few marked crosswalks for pedestrians to use, and

the crosswalks that are provided are in need of repair so that they may be clearly identified by pedestrians and drivers alike.

Pedestrian facilities end at Alabama St., and no sidewalks are provided between Alabama St. and Elm St. along Goodman St. in Sparks. This is a concern for several reasons, mainly because two of the main pedestrian traffic generators for this roadway, the schools located on Elm St., are not connected to the City of Sparks fully due to the lack of sidewalk along this portion of Goodman St. Pedestrians who may be walking from the schools into the city center will be forced to walk along the shoulder of the roadway up to Alabama St., where they can safely access a sidewalk. There is also no lighting provided along this stretch of Goodman St., which is a safety concern for pedestrians, especially if students are forced to walk to or from school in the dark.



There are no facilities provided further along Goodman St. in the City of Sparks and into Cook County. As the road continues past the bridge, it turns into Hutchinson Ave. in the City of Adel. There is signage alerting drivers to the upcoming school zone for the former Cook County High School, however there are no facilities provided at any point up to Mitchell St. Although there are no sidewalks or safe street crossings, there is a fairly worn cow trail showing that pedestrians do utilize the shoulder as a walkway frequently. This shows that the shoulder is adequate to sustain the foot travel along Hutchinson Ave., and the cow trail is separated from the roadway by a safe distance. However, the lack of sidewalk poses safety concerns for pedestrians in several ways, including the insecurity of the walking surface and lack of warning for motorists that a pedestrian may be walking alongside the roadway.

There are no bicycle facilities provided along Goodman St. at any point, making it difficult for bikers to travel without staying in the roadway. Although it is legal and proper for bicycles to travel in the same manner as motor vehicles on the roadways, it is safer and more convenient for both the bicyclers and the motorists if proper facilities are provided for safe bicycle transportation.

Elm St.

The portion of Elm St. that is located within the study area is the section between Goodman St. in Sparks and Mitchell Dr. in Adel. This road is primarily used to service Cook Elementary School, Cook Elementary School and the Wiregrass Georgia Technical College Cook County campus. AADT numbers show that this portion of Elm St. has the third highest daily traffic count of any road in the study area. Other

than a small section at the intersection of Elm St. and Goodman St., the entire length of Elm St. is equipped with a well-maintained, adequately separated sidewalk along the eastern portion of the road. This sidewalk is adequate to provide for the pedestrian needs along Elm St. and to accommodate the two schools; however, the sidewalk is not connected at either end to serve as anything other than a mode of local transportation along this small section of Elm St. Although crosswalks are present and well-maintained, there is no signage other than school zone signs to alert drivers to the potential of pedestrian traffic in the roadway.



The only major issues related to bicycle and pedestrian traffic along this section of Elm St. is the lack of bicycle facilities and the lack of lighting. Lighting could become a concern if students need to travel to the school at times of low light. Safety and security for bicyclists and pedestrians is greatly enhanced when proper lighting is provided to allow for pedestrians to see and be seen.

Mitchell Dr./Mitchell St./Masse Post Rd.

Mitchell Dr./Mitchell St./Masse Post Rd. runs E/W in the City of Adel and in Cook County within the study area. This roadway passes by the Old Cook County High School, which is the current alternative school, and by both parks in the study area. From Elm St. to Hutchinson Ave., Mitchell Dr. serves as a connector from Mitchell St. to the schools along Elm St. and the neighborhoods that are located along Elm St. south of Mitchell Dr. There are no sidewalks or other pedestrian or bicycle facilities on Mitchell Dr. Although there is no visibly worn cow trails along this section of road, several pedestrians were observed walking along Mitchell Dr. during the collection of information.

Mitchell Dr. is not safe for pedestrian traffic for more reasons than the lack of safe walking facilities. There is no lighting provided and there is a lumber yard which poses a large safety concern for citizens who may be walking along Mitchell Dr. Because of this yard, there are obstructions such as parked vehicles and tractor trailer beds which may pose visibility concerns to drivers who may be



leaving the facility. Another barrier to safe pedestrian travel along Mitchell Dr. is the railroad crossing, which is not adequately marked or designed for safe pedestrian crossing. The intersection of Mitchell Dr. and Hutchinson Ave. is also a concern for pedestrians because there is no safe marked crossing area and there are wide turn radii.

After Hutchinson Ave., Mitchell Dr. turns into Mitchell St. Mitchell St. runs parallel to the alternative school and the Masee Post Rd. Complex. Along Mitchell St., between Hutchinson Ave. and Gordon St., there are no pedestrian or bicycle facilities provided. There are no safe, marked crossing areas for pedestrians and there is no lighting. Pedestrians travelling to the baseball fields, other park facilities, or the alternative school are forced to walk close to the road on an unpaved shoulder and must cross the road on their own volition, with no signage or crossing areas to warn drivers of their presence.

A sidewalk begins along Mitchell St. past Gordon St. The sidewalk was originally added to provide pedestrians a safe walkway along Mitchell St. to the Masee Post Road Park and the high school football field. Although the sidewalk is provided all the way from Gordon St. to the football field, it poses significant concerns for pedestrian safety. The first and foremost concern is that the sidewalk is not separated from the roadway. The only way to determine that a sidewalk is provided is a change in material from the asphalt of the main road to the concrete of the sidewalk. Other than the material change, the only thing separating pedestrians from vehicles is the road striping. This sidewalk is in need of repair and should be separated from the roadway by a buffer area to protect those pedestrians walking along Mitchell St. and Masee Post Rd. from the close and fast vehicular traffic.



No lighting is provided along this section of roadway and there are no safe crossing areas for pedestrians to travel from one side of the road to the other. The sidewalk that is provided is only located along the eastbound side of the road. Another significant concern that exists here is the prevalence of driveways exiting onto Mitchell St. over the sidewalk. This poses a significant concern for drivers, who may be unaware of pedestrians travelling along the sidewalk as they enter the roadway, and for pedestrians who must keep a careful watch for cars leaving the driveways. These concerns are amplified at night, because of the lack of lighting along Mitchell St.

At Bear Creek Rd., Mitchell St. turns into Masee Post Rd. Along Masee Post Rd., up to Masee Post Road Park and the high school football field, the sidewalk continues with a small separation from the roadway for a while, and then is again connected with the road. There are several areas along this stretch of sidewalk in need of repair as well. There are no marked crosswalks up to the football field and there are no facilities provided between the football field and Dottie St. or between Dottie St. and Patterson St.



The main concerns along Mitchell Dr./Mitchell St./Masee Post Rd. are the lack of bicycle facilities and lighting. Dangers of walking and biking along Mitchell Dr., are present due to the limited sight distance and large truck movement, the lack of facilities between Hutchinson Ave. and Gordon St., and the sidewalk's close proximity to the main roadway between Gordon St. and the football field. Lighting is also a major concern and should be considered to provide safe movement for pedestrians in low light situations.

Patterson St./Patterson Ave.

Patterson St., which runs E/W, connects Masee Post Rd. in the City of Adel and Goodman St. in Sparks. Patterson St., which changes to Patterson Ave. after crossing into the Sparks city limit, is classified as a Rural Minor Collector and passes by the Cook Primary School. Although AADT figures do not show a very highly traveled route, with a count of 790 near the school, with school traffic and potential pedestrian traffic from the local neighborhoods to the school it is important to ensure that safe walking and crossing facilities are provided for those who may walk or bike their children to school. Currently there are no bicycle or pedestrian facilities provided along Patterson St. There are no designated crossing areas and the only signage provided indicates that drivers are entering and exiting a school zone. There is some lighting along Patterson St. near the school and neighborhood



areas, however it is insufficient to provide safety of security for any pedestrians or bicyclists.

Although a majority of Patterson St, is residential between Patterson St. and Barrett Rd., the remainder of the road is very rural and has a few houses, but no other traffic generators. The distance between the neighborhoods and the school to the city center of Sparks is about 2 miles. The lack of pedestrian activity is most likely not related to the lack of facilities, however, if facilities were provided more pedestrians may use them to access the school or for recreational purposes. Although no pedestrians were observed walking along Patterson St./Patterson Ave. during site visits several bicyclers were observed riding along the road.

Other Local Roads

Due to the lack of facilities across the board in all other areas, the other roads assessed will be addressed together. Although not all of the remaining roadways in the area have the exact same features, in general they share several things in common. The most prominent similarity is that there are no sidewalks located along any other roadways in the study area. There are also no bicycle lanes or other facilities for bicyclists on any roads in the study area. Another issue, even in areas where pedestrian facilities are provided, is the lack of street lighting to provide safe travel for pedestrians in low light situations. In the neighborhood between Masee Post Rd. and Patterson St., street lights are provided at extended intervals, but they are not sufficient to ensure that bicyclists and pedestrians can be seen by motorists at all times.



On most local roads throughout the study area there is a walkable shoulder, or a shoulder on which pedestrians can safely travel even in the absence of a sidewalk. This does not mean that a sidewalk is not necessary, but that pedestrians can, with relative safety, move along the side of the roadway without having to walk too close to moving vehicles.

Universal Considerations

I. Do pedestrian facilities meet the needs of all pedestrians?

Pedestrians can vary greatly in their age and ability. It is important to consider all potential users when assessing whether or not provided facilities in a given area serve the needs of all potential users. Pedestrian and bicycle facilities within the study area do not meet the overall needs of all users of the system. A majority of the roadways in the study area have no facilities provided. For the average middle-aged person, walking along a grass or dirt shoulder is no problem, but for those with mobility limitations, such as those who require a wheelchair or walker or pedestrians with children in a stroller, this is not an option. Where sidewalks are provided, it is important to ensure that they are adequate and well-maintained so that they may provide a safe and accessible path for all users. It is important to ensure that all facilities, especially crosswalks and sidewalks, are ADA compliant.

Throughout the study area a common issue noted is the lack of lighting. “Fatal pedestrian crashes typically peak later in the day, between 5 and 11 p.m., where darkness and alcohol use are factors.”^{vii} More pedestrian fatalities occur between dusk and dawn because low light conditions adversely affect pedestrian and driver sight distance. While this is important in all cases, lighting is especially important at street crossings. In many rural areas, as is the case in the study area, ambient light from houses, public facilities, and other sources is not enough to provide for safe and effective travel for pedestrians and bicyclists. Because of this, pedestrian lighting is often needed.

Another issue to note when considering whether all users are served is whether those with visual impairments or language barriers are accounted for. If a person is blind or has difficulty seeing, it may be necessary to have audible cues or other prompts to ensure that they know where and when to walk. In the same light, if there is a high population of residents in an area who are unable to read pedestrian signage because of a language barrier it may be necessary to provide multilingual signage. The main issue is to ensure that all potential users of the pedestrian and bicycle system have been considered and the needs of all users have been addressed.

II. Are paths safe, continuous, and convenient throughout the study area?

In order for the safest and most effective transportation system for non-motorized users to be complete it is important to have the highest level of connectivity possible. In several locations throughout the study area where facilities are provided it is easy to see how greater connectivity would improve the safety and mobility of pedestrians. According to an article entitled “Roadway Connectivity: Creating More Connected Roadway and Pathway Networks” by the Victoria Transport Policy Institute,

Connectivity refers to the density of connections in path or road network and the directness of links. A well-connected road or path network has many short links, numerous intersections, and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, creating a more accessible and resilient system.

With greater connectivity comes more and safer usage. With more direct travel between destinations and decreased travel distances pedestrians using the system for transportation are able to spend less time on or near the roadway, and with increased route options they are able to choose the safest route.

There is little connectivity in the study area, with sidewalks that are provided not connecting to other sidewalk segments, such as can be found in Sparks along S. Goodman St. The sidewalk along Goodman St. ends well short of Elm St., on which two schools and the Technical College are located. Although pedestrians travelling between Sparks and Elm St. are able to walk safely on a sidewalk for a majority of the trip, the greatest concern is the area without a sidewalk, where they are forced to walk closer to the roadway on an unimproved surface. In areas like this, connectivity should be addressed to provide a full and safe walking path from origin to destination.

Recommendations

Communities that strive to enhance the ability of pedestrians and bicyclists to move safely and securely along the roadways can see social, environmental, and health benefits that they would most likely not see otherwise. In an article entitled “Zoning and Planning for Bicycle and Pedestrian Transportation Facilities” by the Vermont Planning Information Center, several tasks are listed as being helpful or even necessary for a community to accomplish its goals of becoming bicycle and pedestrian oriented:

- Assessing local needs for pedestrian, bicycle, and trail access and mobility
- Creating a plan for upgrading existing facilities and building future networks and for obtaining funding
- Building and maintaining local pedestrian and bicycle and trail facilities
- Coordinating facility planning and development with adjacent communities and regions
- Enacting local bylaws and subdivision regulations that enhance compact settlement and encourage walking and bicycling
- Evaluating pedestrian needs within site plan or subdivision review and requiring developers to invest in pedestrian facilities and/or trails
- Forming local citizen advisory committees for pedestrian and bicycle activities

These are good points to take into consideration when attempting to make a community more bicycle and pedestrian friendly. Although this is not a comprehensive list of steps, nor a list of necessary steps, it is a good guide to help a community develop its own plan for improving safety for walkers and bicyclers.

Pedestrian and bicyclists safety is clearly the main concern and a good reason to have adequate facilities and proper planning in place, but to go along with these issues communities and local governments have another important reason to ensure that users of non-motorized transportation are taken into consideration: liability. If there is debate about the cost-benefit of proper planning for bicycle and pedestrian facilities, the FHWA explains in its *FHWA University Course on Bicycle and Pedestrian Transportation, Lesson 22: Tort Liability and Risk Management* that “To an increasing degree, issues of risk management and tort liability are becoming major determinants of planning, engineering, and implementation programs for bicyclists and pedestrians.” The lesson makes clear the point that facilities that fail to “fully incorporate the needs of all users increase the likelihood of potential court settlements in favor of those who are excluded.”

The Lesson goes on to explain that inaction can be much more costly than pre-emptive planning efforts because more governments are being sued now than ever due to their perceived ability to pay, and not necessarily their actual fault in the matter. “...there is a tendency toward larger and increased liability in areas that once had some degree of immunity, with a continuing rise in the size of claims. The Lesson posits and it is recommended that implementing an aggressive risk management program can help hold off these problems.

Funding Options

Many communities are unable to implement bicycle and pedestrian facility improvements or additions for lack of funding. Although bicycle and pedestrian projects are of high importance and communities may consider them high priority projects, they often hold a lower level of priority than road maintenance or capacity projects, which can expend most of the available funding. There are several State and Federal funding sources that may be applied to these projects to aid areas such as Cook County where these projects may not be funded otherwise. There are also various private grants and programs that provide funding for bicycle and pedestrian projects.

FHWA Funding Sources

- Surface Transportation Program- Funds from this program may be used for construction of pedestrian walkways and bicycle transportation facilities; non-construction projects for safe bicycle use; to modify public sidewalks to comply to ADA standards. Projects funded with this program do not have to be within the right-of-way of a Federal-Aid Highway.
- Transportation Enhancement Program- Funds from the Transportation Enhancement Program can be used to fund bicycle and pedestrian projects that fall under three categories: bicycle and pedestrian facilities, safety and education for pedestrians and bicyclists, and rails-to-trails programs.
- Highway Safety Improvement Program (HSIP)- The goal of this program is to achieve significant reduction in traffic fatalities and serious injuries on public roads. Funds can be used for improvements for pedestrian or bicyclist safety; construction and yellow-green signals at pedestrian-bicycle crossings and in school zones; identification of and correction of hazardous locations, sections and elements that constitute a danger to bicyclists and pedestrians.
- Recreational Trails Program- These funds may be used to develop and maintain recreational trails and trail-related facilities for both motorized and non-motorized recreational trail uses.

GDOT

- Governor's Office of Highway Safety (GOHS) Grant Program- The mission of the GOHS is "To educate the public on highway safety issues and facilitate the implementation of programs that reduce crashes, injuries and fatalities on Georgia roadways." These funds may be used to fund bicycle and pedestrian safety, awareness and education programs.

- Land & Water Conservation Fund (LWCF)- This program, which is offered through the GA DNR, includes funding for acquisition of land for recreation, parks, and greenways.

ⁱ A Policy on Geometric Design of Highways and Streets, 1994 (The Green Book). American Association of State Highway and Transportation Officials (AASHTO)

ⁱⁱ United States Department of Transportation. *United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation*, , March 11, 2010. <http://www.dot.gov/affairs/2010/bicycle-ped.html>

ⁱⁱⁱ United States Department of Transportation, Federal Highway Administration. *Design Guidance, Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*. March 2008.

<http://www.fhwa.dot.gov/environment/bikeped/design.htm>

^{iv} Georgia Department of Transportation, Georgia Department of Motor Vehicle Safety, *Crash Analysis, Statistics & Information*. Jan. 2008. <http://www.dot.state.ga.us/statistics/CrashData/Documents/CASI2008.pdf>

^v “ “

^{vi} United States Department of Transportation, National Highway Transportation Safety Administration, *Traffic Safety Facts: 2008 Traffic Safety Annual Assessment*. June, 2009. <http://www-nrd.nhtsa.dot.gov/pubs/811172.pdf>

^{vii} “Crash Statistics”, *Pedestrian Safety Guide and Countermeasure Selection System*. PEDSAFE, Web. <http://www.walkinginfo.org/pedsafe/crashstats.cfm>