April 2014

Safe Routes to School Audit Report
Chiles High School

Leon County
Public Schools

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Acknowledgements

Renaissance Planning Group and Wendy Grey Land Use Planning, LLC would like to thank the following organizations for their input, guidance, and resources in developing this Safe Routes to School Audit report for Chiles High School.

Capital Region Transportation Planning Agency (CRTPA)

Safe Routes to School (SRTS) National Partnership

Leon County Public Schools (LCS)

Florida Department of Transportation (FDOT)

Leon County Sheriff's Office (LCSO)

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Chapter 1: Introduction

Project Purpose

The purpose of this Safe Routes to School (SRTS) audit report is to provide recommendations to improve student walking and bicycling rates to and from school. In addition, this report addresses other enhancements to improve the overall travel safety and convenience for students, parents and the school. Improvement recommendations are provided in the following categories: infrastructure, programs, and polices. This SRTS audit includes an array of considerations formulated from a range of research and analytical tools employed to better understand and comprehend the issues and concerns affecting current walking and bicycling rates of student to and from school. This report highlights a summary of students' school travel patterns through in-class student travel surveys, parent self-reported surveys, on-site meetings with school officials, and field reviews.

School Overview

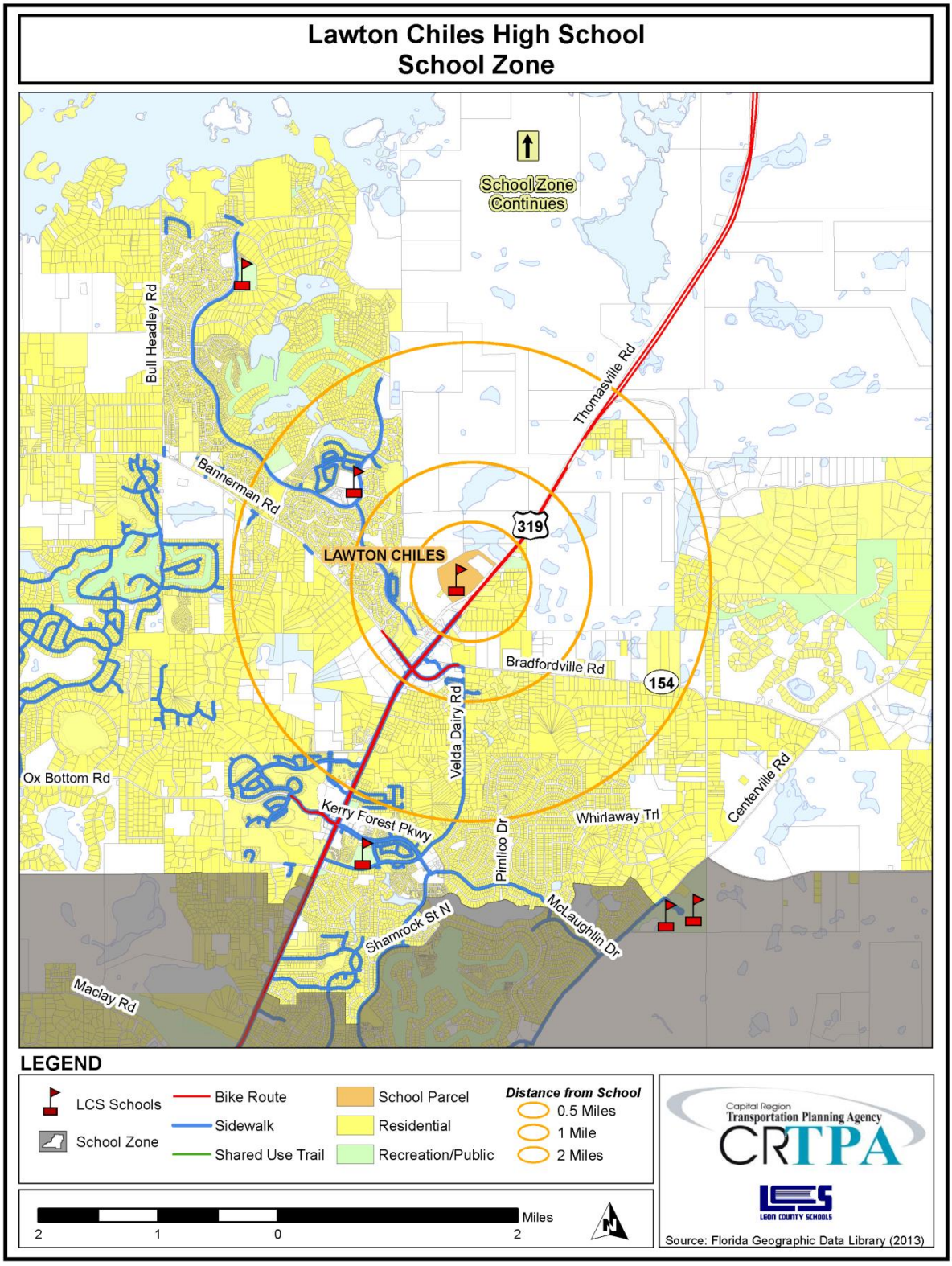
Chiles High School is located at 7200 Lawton Chiles Lane, Tallahassee, 32312 in Leon County, Florida. It is part of the Leon County Public Schools system. The school opened its doors in August 1999. The school offers honors, Advanced Placement courses, as well as, vocational programs. In addition the school offers around 25 athletic groups and over 40 clubs. Regular school hours are from 7:30am to 1:50pm.

The number of students enrolled at the school, for the 2013 school year, was 1,937. The school has a current capacity for 1,991 students. The school includes grade levels 9th to 12th grade.

Students attending this school feed from Desoto, Hawks Rise, Killearn Lakes, and Roberts Elementary Schools and either from Deerlake or Montford Middle Schools.

School Zone

The Chiles High school zone encompasses the neighborhoods of Killearn Acres, Tredington Park, Royal Oaks, Fox Croft, Rose Hill, Centerville, Golden Eagle, Quail Rise, and Killearn Lakes. Land uses in the school zone consist of mostly residential and some recreation. The Chiles school zone includes two major roadways. Thomasville Road runs southwest to northeast and bisects the zone into east and west. Bannerman Road, which turns into Bradfordville Road, runs mostly east to west and bisects the zone into north and south. Desoto Trail Elementary School, Killearn Lakes Elementary School, and Deerlake Middle School fall within the Chiles school zone on Tredington Park Drive, Deer Lake Drive East, and Deer Lake West, respectively. Recreation facilities in the area include mostly golf courses such as Golden Eagle and Summerbrooke.


Lawton Chiles High School
School Zone
School Zone Continues
Bull Headley Rd
Bannerman Rd
Thomasville Rd
319
LAWTON CHILES
Bradfordville Rd
154
Velda Dairy Rd
Ox Bottom Rd
Kerry Forest Pkwy
Whirlaway Trl
Centerville Rd
Pimlico Dr
McLaughlin Dr
Shamrock St N
Maclay Rd
LEGEND
LCS Schools
School Zone
Bike Route
Sidewalk
Shared Use Trail
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Miles
2
1
0
2
Capital Region Transportation Planning Agency
CRTPA
LEON COUNTY SCHOOLS
Source: Florida Geographic Data Library (2013)

Chapter 2: On-Site Meeting and Inventory

Date and Weather Conditions

The on-site inventory meeting was conducted on March 6th, 2013 with temperatures in the lower 50 degrees Fahrenheit.

Highlights and Key Observations of On-Site Meeting

During this visit, Chiles High School representatives provided insight about students' travel to and from school and discussed what was working, or not working well. The meeting began by discussing current policies, programs, and administration related to students' travel to and from school. Examples of safety education programs discussed include crossing guards and traffic education. Additionally, before- and after-school programs provided for students were discussed.

It was noted that there are no school zone warning lights or signs along either Thomasville Road or Lawton Chiles Lane, except a small signs that says "School Entrance." Additionally, there are no traffic calming measures present on either roadway. Students are permitted to arrive to school as early as 7:00am and there are after school programs, clubs, and sports, until at least 6:00pm. School representatives did not indicate that there were any concerns with safety or security at the school. Bicycle/pedestrian entrance gates on campus remain open during all times. There are no designated crossing guards located at the school.

It was noted by school representatives that the school has an open lunch policy where students in 11th and 12th grades are allowed to leave the school campus during their designated lunch period. Students must have, and maintain, at least a 2.0 grade point average (GPA) to be eligible. Eligible students can then fill out an application for off-campus lunch privileges with the approval of their parents. This program is heavily used by students at the school; however, there are limited dining options near campus for those without automobile access.

Circulation

During a tour of the school, school representatives provided explanations of school circulation patterns as to where and how children were entering and exiting school grounds via walking or bicycle and arriving and departing by automobile or school bus.

The school is located in a mostly suburban area, where bicycle and pedestrian infrastructure is mostly limited to a few residential streets. Additionally, a large area surrounding the school is forested and lacks residential land uses. As a result, there are a very limited number of students that walk or bicycle to/from school as many must rely heavily on school busing and automobile rides. School representatives estimate that only about ten students walk to campus. It was also noted that during morning commuting hours it is still dark outside which may deter potential walkers and bicyclists. Walkers and bicyclists can enter campus from along several points along Lawton Chiles Lane; however, there is a conflict point near the school bus zone driveway. There is a sidewalk that leads directly to campus from Lawton Chiles Lanes but students are discouraged from crossing the school bus driveway that leads to

the sidewalk. There are two bicycle racks near the west side of campus that has space for approximately 20 bicycles; however, during the site visit there were no bicycles parked.

The school bus drop-off and pick-up zone mostly functions adequately. The zone for arrival and departures is partially covered and there is direct access to a walking facility. There is one thru lane and two bus only lanes in the zone to accommodate the 11 morning and afternoon school buses. School representatives noted that there is almost double the amount of students riding buses in the afternoon; likely, due to parents' inability to pick-up students at such an early time of day. It was also noted that there are no known Star Metro riders at the school.

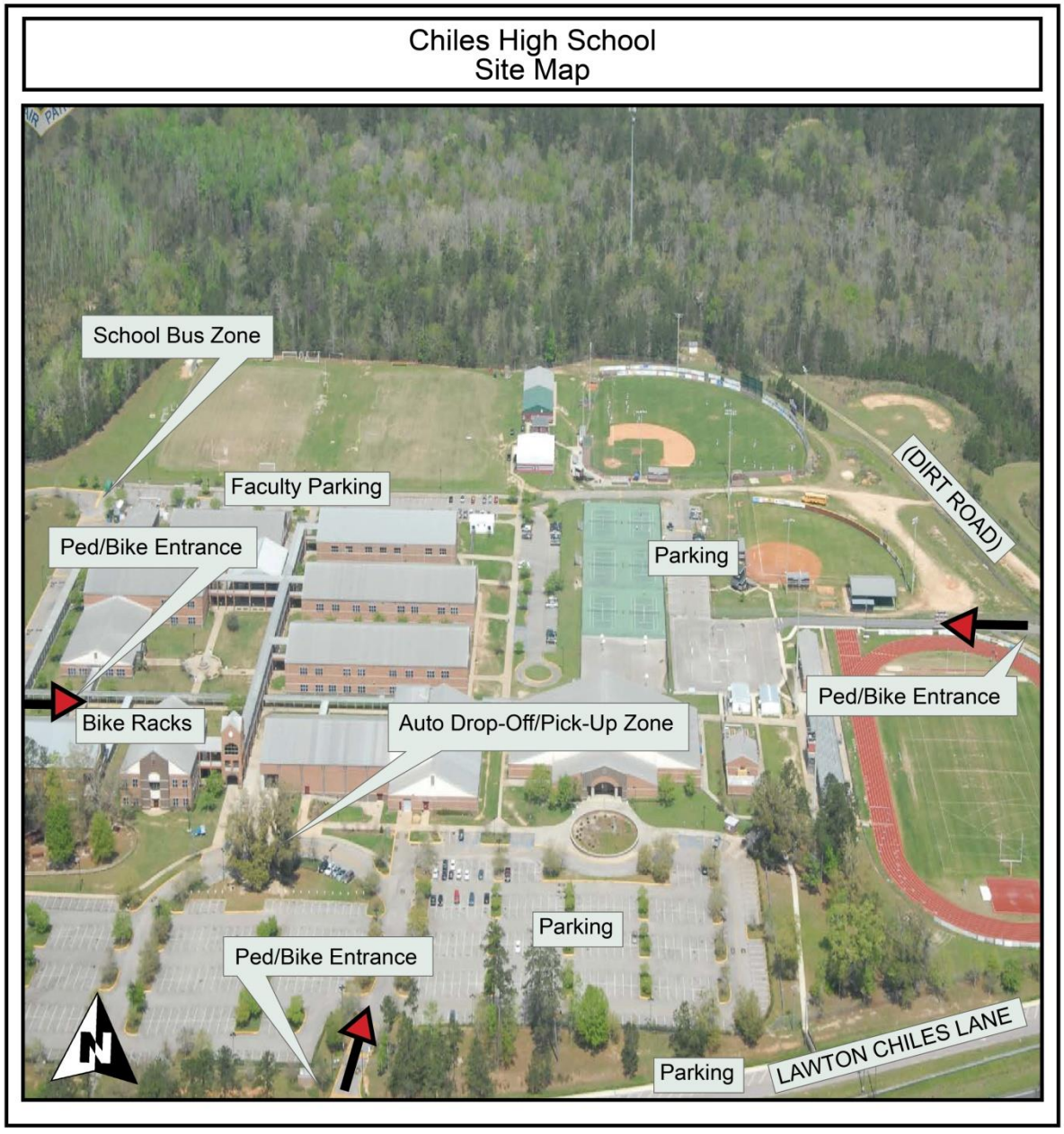
The parent drop-off and pick-up zone functions adequately to accommodate the volume of automobiles entering and exiting the site; however, there are reports of drivers not obeying the rules and directions for student drop-off/pick-up. Signs posted near the school bus zone driveway state "Buses and Faculty Only 7:00A to 3:30P;" however, parents have been known to drop off students in the school bus zone instead of using the front automobile pick-up/drop-off area. The designated automobile zone is not covered which can cause stress during times of inclement weather. It was also noted that almost half of the students drive themselves, alone, to/from school each day and that all 750 parking spots are used. There are no school policies restricting which students can drive to/from school.

Inventory Map

An aerial photograph showing Chiles High School is located on the following page. As shown in the photo, the school fronts Lawton Chiles Lane. Students can access campus from this street and enter from the west, east, or south side of campus. Bicycle parking racks are located near the west side of the school.

Standard width sidewalks are located intermittently along the school-side of Lawton Chiles Lane just west of the school property and directly in front of the school. Additionally, standard width sidewalks are available along both sides of Thomasville Road, located just south of Lawton Chiles Lane, westward from Wolfpack Way. There are no sidewalks along Wolfpack Way between Lawton Chiles Lane and Thomasville Road.

The automobile pick-up and drop-off zone is located directly in front of the school's main entrance. Automobiles both enter and exit the zone from the main entry/exit point of Lawton Chiles Lane. Parking spaces are available along Lawton Chiles Lane as well as in front of the main school's entrance. The bus drop-off and pick-up zone is separately located along the west side of the school. Buses enter the zone from and exit onto Lawton Chiles Lane. Staff parking spaces are located in the rear of the school near the bus zone as well. A dirt road behind the school provides access to additional parking spaces located in the northeast portion of the site near the tennis courts.


Chiles High School
Site Map
School Bus Zone
Faculty Parking
Ped/Bike Entrance
Bike Racks
Auto Drop-Off/Pick-Up Zone
Parking
(DIRT ROAD)
Ped/Bike Entrance
Parking
Ped/Bike Entrance
Parking
LAWTON CHILES LANE
N

Issues and Opportunities

School-specific issues, opportunities, and impediments concerning the SRTS program were discussed.

Geography and a teenage "rite-of-passage" appear to be the primary issues with students' ability to walk and bicycle to school. Since high school zones are so large in size, students often live more than two miles away from their home which can create a distance that is too long to walk or bicycle to school within a reasonable amount of time. Additionally, many students tend to enjoy being able to drive themselves to school since they have never been able to in the past and had to rely upon others. Many students also participate in after-school clubs and sports that require them to bring additional items from home. Thus, it may be harder to walk or bicycle with these extra items. These kind of external factors are often difficult to overcome, at least in the short term.

With what opportunities that do exist to increase walking and bicycling, including student safety, consideration should be given to Thomasville Road or Lawton Chiles Lane. Traffic calming measures should be explored to reduce automobile speeds and increase awareness of students in the area, especially during school commuting times. Also, school-related and –supportive committees such as the Parent/Teacher Organization (PTO) can be used to help educate parents on the opportunities and benefits to having their children walk or bicycle to school, where such options are feasible.

These groups can also help get the word out to parents concerning on-campus issues, such as appropriate protocol for dropping-off and picking-up students in the designated automobile zone, instead of the school bus zone. Furthermore, these groups could see if students would be interested in alternative forms of transportation such as carpooling to and from school or, at least carpooling off-campus during lunch time. Education and enforcement during the morning and afternoon commuting hours are critical.

Chapter 3: Student Travel Survey – Summary of Results

School administrators carried out a school-wide travel survey to evaluate the ways in which students from 9th to 12th Grade traveled to their school from home during a one week period. (A copy of the student travel survey can be found in **Appendix A**.)

Not surprisingly, the survey indicates that the vast majority of students at Chiles High School – approximately nine out ten students – arrive to school by car. Riding a school bus ranked a distant second place at approximately eight percent. A low percentage of students surveyed, less than one percent, reported walking to school and none of the students reported biking or arriving to school by public bus. (A detailed description of the analysis by mode can be found in **Appendix B**.)

SUMMARY OF SCHOOL-WIDE RESULTS

	Walk	Bicycle	Automobile	School Bus	Public Bus
Average Overall	<1 %	0 %	92 %	8 %	0 %

Chapter 4: Parent Survey – Summary of Results

School administrators carried out a school-wide survey to better understand the neighborhood safety issues and concerns of parents and the factors influencing their decision to allow their children to walk or bicycle to school. (A copy of the parent survey can be found in **Appendix C**.)

Parent survey results were counted and analyzed by grade level groupings of 9th through 12th Grade. (A detailed description of results for the parent surveys can be found in **Appendix D**.)

The surveys of students living within two miles from the school indicate that a greater percentage of Chiles High School students arrive by car in the morning, while fewer return home by the same mode in the afternoon. The car-to-school average for a typical week is 91% in the morning and decreases to 55% in the afternoon. In the afternoon, there are greater percentages of students returning home by school bus or walking. Overall, none of the students in the morning and approximately one-tenth of students in the afternoon commute to and from school by walking or bicycling. The school bus-to-school average for a typical week is 9% in the morning and increases to 36% in the afternoon. None of the students walked, rode a bike, rode a public bus, or used an alternative commute mode in the morning. However, the walk-to-school average for a typical week in the afternoon was 9% of students.

Neighborhood safety concerns for parents of high-school-aged (9th-12th) children include four main concerns including issues with speeding vehicles, transportation outside of the school zone, the parent drop-off/pick-up area of school, and sidewalks/walking. There were approximately five comments of concern regarding issues with speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Thomasville Road and Bannerman Road. Additionally, there were approximately two comments of concern regarding issues with transportation outside of the school zone. General concerns include multi-lane roadways without crossing guards available and traffic back-ups on Kinhega Drive. Also, there was one comment of concern regarding the parent pick-up/drop-off area of school. One parent mentioned that the area designated for student pick-up/drop-off has very little lighting in the morning which makes it feel unsafe, so most parents end up using the front entrance or bus drop-off. Lastly, there was one comment of concern regarding sidewalks and walking. One parent expressed the need for more sidewalks and crosswalks to make their child's trip from the bus-stop to home and vice-versa, safer.

With regard to factors that might influence their decision to allow their child to walk or bike to school, survey responses indicate that factors such as having continuous and separated bicycle/pedestrian pathways, enforcing speed limits in school zones, availability of crossing guards, having a secure place to store bicycles, and having a greater adult presence along walk routes to school were agreed upon by parents from 9th-12th grade.

Chapter 5: Neighborhood Field Review

A neighborhood field review was conducted on April 25th, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Chiles High School. On the day of the field review, the weather was overcast with some light rain and temperatures in the 70's Fahrenheit. Following the field review, a walk/bike shed area was delineated on a map within the school zone, surrounding the school. This chapter includes a Walk/Bike Shed section describing the approach to defining the area and an associated map for Chiles High School.

Character of Neighborhood Area

Chiles High is surrounded on the west and south by mostly suburban, single-family homes while the north and east sides are comprised of vacant, forested land. The street pattern throughout the surrounding residential areas includes mostly curves and cul-de-sacs. Bike-ped infrastructure within the two-mile area surrounding the school is mostly limited to the Golden Eagle and Quail Rise neighborhoods, as well as Velda Dairy Road. A portion of Thomasville Road, adjacent to the school property, does not have sidewalks or crosswalks.

Major roadways in the school zone include:

- Thomasville Road, a southwest-northeast roadway. It transitions from a four lane 60-65mph roadway north of Bannerman Road to a 40-45mph six lane roadway south of Bannerman Road.
- Bannerman Road/Bradfordville Road, a mostly east-west four lane roadway with a post speed limit of 45mph.

Crash Data

Crash data were collected from the Florida Department of Transportation's (FDOT) State Safety Office for years 2009-2011. Crashes reported include any crashes within Leon County and on any local and major roadways. The data were collected for a typical school year, August 15th to May 30th. Additionally, only bicycle and pedestrian crashes that occurred during typical school commute hours, 7:00am to 9:30am and 1:50pm to 4:20pm, and school days, Monday to Friday, were examined.

There were no bicycle or pedestrian crashes reported within the theoretical two-mile walk/bike radius of Chiles High School between 2009 and 2011.

Neighborhood Assessment

Since the areas north and east of Chiles High School are mostly non-residential, only the areas west and southwest lend themselves well to walkability and bikeability. The suburban style layout of the neighborhoods in the area means that there is one main direct route to access school, along Deer Lake South and Kinhega Drive. However, sidewalk and bicycle infrastructure along these roadways is comprehensive and there are multiple designated crosswalks along the route. Pedestrian and bicycle infrastructure does not tend to extend into local neighborhood streets except those north of Deer Lake South. Although the infrastructure reaches some neighborhoods further away, much of it is along the major roadways or outside of the theoretical two-mile walkability of high school students and, thus, poses safety concerns for students walking or bicycling.

Project-specific recommendations can be found in the Findings and Recommendations chapter of this report.

Walk/Bike Shed

As mentioned previously, a walk/bike shed area was delineated on a map within the school zone, surrounding the school. The Chiles High School walk/bike shed map is included on the following page.

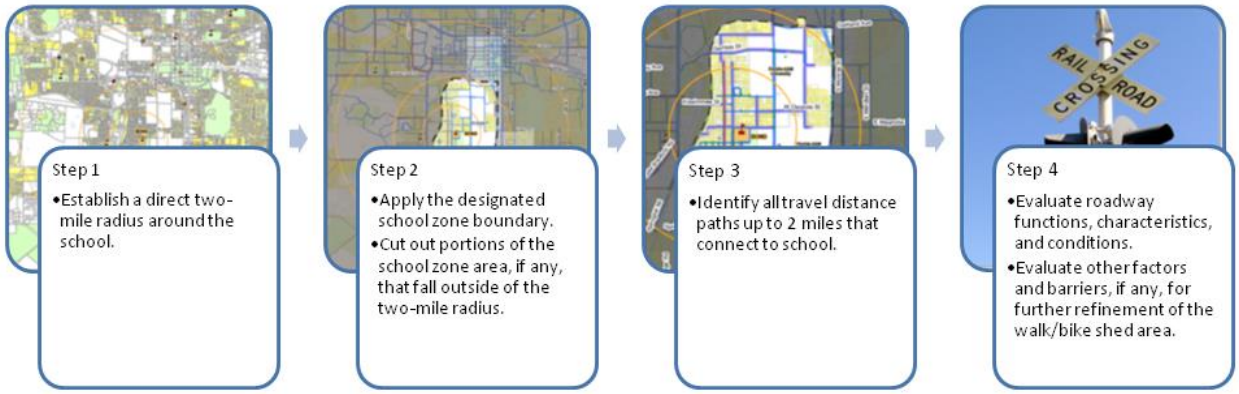
The walk/bike shed area and associated map are not meant to suggest that high school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, all students are not expected to walk or bike to school from practically any distance. Students without the appropriate experience or maturity level will likewise be more limited in their accessibility to school. Therefore, the walk/bike shed map functions more as a guide for parents, school administrators and students to evaluate and identify areas potentially commutable and conducive to walking and bicycling to school. The final decision to walk or bicycle to school is still at the discretion of the parents.

The walk/bike shed for Chiles High School mostly extends, approximately two miles, northwest of the school. Thomasville Road with its limited crossing points, high speeds of traffic, and lack of pedestrian accommodations forms the eastern limits of the walk/bike shed. Also, the lack of residential land uses directly north of the school contributes to the additional eastern limits of walk/bike shed. Additionally, because Bannerman Road has high speeds and lacks bicycle/pedestrians facilities, the area directly to the west is not included. Considering the typical distance a high-school-aged student can be expected to travel on foot or bike combined with the presence of crosswalks and bicycle/pedestrian accommodations, the northwest limits of the walk/bike shed extends approximately two miles into the Killearn Lakes neighborhood.

It should be noted that certain improvement recommendations could potentially expand the potential walk/bike shed area, due to improved conditions for walking and bicycling.

Methodology

Many factors were evaluated to ultimately determine the limits of the walk/bike shed area. The general methodology for identifying the shed included the following steps:



Evaluating Roadways

Four types of safety hazards were evaluated pertaining to roadways. They include:

- Sidewalks along roadways
- Roadways without sidewalks
- Roadway crossing points
- Railroad crossing points (along roadways)

Primary hazard conditions include, but are not necessarily limited to factors such as:

- Sidewalk width (where present)
- Separation between the walking/bicycling space and the vehicular travel space
- Intersection control measures for crossing
- Number of rail tracks (for railroad crossings)
- Traffic volume
- Traffic speed
- Roadway geometry
- Length of a hazardous condition present

Multiple factors are no doubt present for each hazard. And no two factors or situations are the same. This makes evaluation as much of an art as a science. Nonetheless, there are certain conditions in and of themselves that are considered decisive limitations to students walking and/or bicycling to school. Such conditions where walking and/or bicycling are deemed hazardous include the following. It should be noted that only one condition from either table needs to be met for a situation to be deemed hazardous.

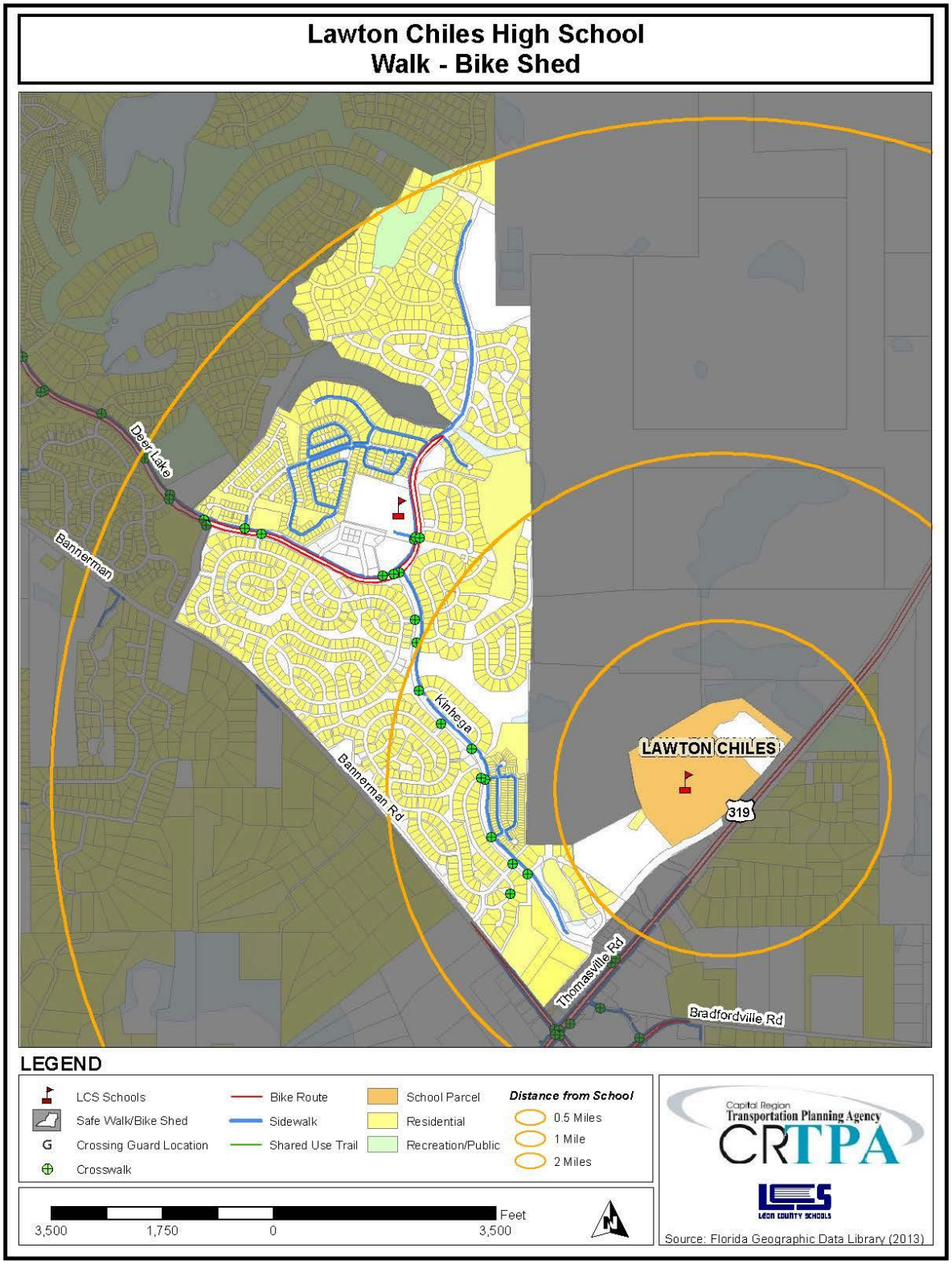
Travel Along Roadways				
Sidewalk Type	**Hazardous Conditions**			
	Type of Road	**Posted Speed Limit**	**Peak Hour Traffic**	**Length**
< 2' wide sidewalk OR without sidewalk	All roadways other than local, neighborhood streets	N/A	N/A	Exceeding 0.5 miles in length
</= 3' wide sidewalk OR </= 4' separation from traffic	More than 2 travel lanes	Greater than 35 mph	Greater than 2,000	Exceeding 1 mile in length
> 4' wide sidewalk AND >/= 4' separation from traffic	More than 4 travel lanes	Greater than 45 mph	Greater than 3,500	Exceeding 2 miles in length

Roadway Crossing Points				
Crosswalk Type	**Hazardous Conditions**			
	Type of Road	**Posted Speed Limit**	**Peak Hour Traffic**	**Length**
Unmarked Crosswalk	More than 2 travel lanes	Greater than 25 mph	Greater than 1,500	N/A
Unsignalized Crosswalk				
Marked Crosswalk	Greater than 4 travel lanes	Greater than 40 mph	Greater than 2,000	N/A
Signalized Crosswalk				

Evaluating Other Factors and Barriers

In addition to that identified above, information collected from the field review, anecdotal comments from parent surveys, discussions with school administrators and staff, and general research findings were applied to determine the ultimate walk/bike shed area commuting limits for the school. Such additional information evaluated included the following:

- Barriers such as water bodies and high-speed, restricted access highways
- Historic travel accident patterns
- Poor quality pedestrian infrastructure along routes
- Pathways of excessive length through nonresidential areas as well as excessive intersecting vehicular access drives


Lawton Chiles High School
Walk - Bike Shed
Deer Lake
Bannerman
Kinhega
Bannerman Rd
LAWTON CHILES
319
Thomasville Rd
Bradfordville Rd
LEGEND
LCS Schools
Safe Walk/Bike Shed
Crossing Guard Location
Crosswalk
Bike Route
Sidewalk
Shared Use Trail
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Feet
3,500
1,750
0
3,500
Capital Region Transportation Planning Agency
CRTPA
Source: Florida Geographic Data Library (2013)

Chapter 6: Findings and Recommendations

The number of access points for walkers and bicyclists onto the Chiles High school campus is adequate; and there are few major issues to note concerning automobile and school bus access and circulation. As such there are few on-campus infrastructure-related recommendations for improvement. There are, however, some opportunities to improve walking and bicycling opportunities as well as safety throughout the surrounding neighborhoods. In addition, there are some limited policy and programmatic recommendations for the school's consideration.

While Chiles is hemmed in on two sides by mostly non-residential land uses and a fairly busy roadway, the surrounding neighborhoods in the west and southwest direction are fairly well-connected to the school. And while there are many streets without sidewalks, most of these streets are internal residential subdivision streets with low-volume traffic. Most can be navigated by walkers and bicyclists with a fair amount of ease.

Infrastructure Improvements

The following recommendations supplement the current walk/bike shed area as delineated on the map, addressing infrastructure needs and improvements that would enhance walking and bicycling safety and convenience to and from Chiles High School. They include both on- and off-site improvements as follows:

Chiles High School On- and Off-Site Recommendations

	Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1	Install Additional Lighting Fixtures	Parent Pick-Up/Drop-Off Zone	N/A	N/A	N/A	N/A	N/A	2 light poles

	Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1	Add Striped Crosswalk	School Bus Zone Driveway	N/A	N/A	North Side of Lawton Chiles Lane	SW-NE	approx. 53’	Connect sidewalks on either side
B2	Sidewalk Tree Maintenance	Lawton Chiles Lane	School Bus Zone Driveway	Beech Ridge Trail	North Side of Lawton Chiles Lane	SW-NE	N/A	
B3	Install School Zone Signs/Pavement Markings	Lawton Chiles Lane	N/A	N/A	Just east of Rhea Road	N/A	N/A	
B4	Add Striped Crosswalk (incl signage)	Kinhega Drive	At Beech Ridge Trail	East side of Beech Ridge Trail	SW-NE	approx. 52’		
B5	Install Additional Lighting Fixtures	Kinhega Drive	Beech Ridge Trail	Deer Lake South	West Side of Kinhega Drive	SE-NW	approx. 5,495’	Every 100’ or wherever deemed appropriate

The table corresponds to an infrastructure recommendations map on the following page.

On-Site Recommendations

A1) Install additional lighting fixtures – While there are currently lighting fixtures in the parent pick-up/drop-off zone, parent surveys revealed that lighting is still an issue during the early morning drop-off hours. Adding two additional light poles should suffice any concerns in the zone.

Off-Site Recommendations

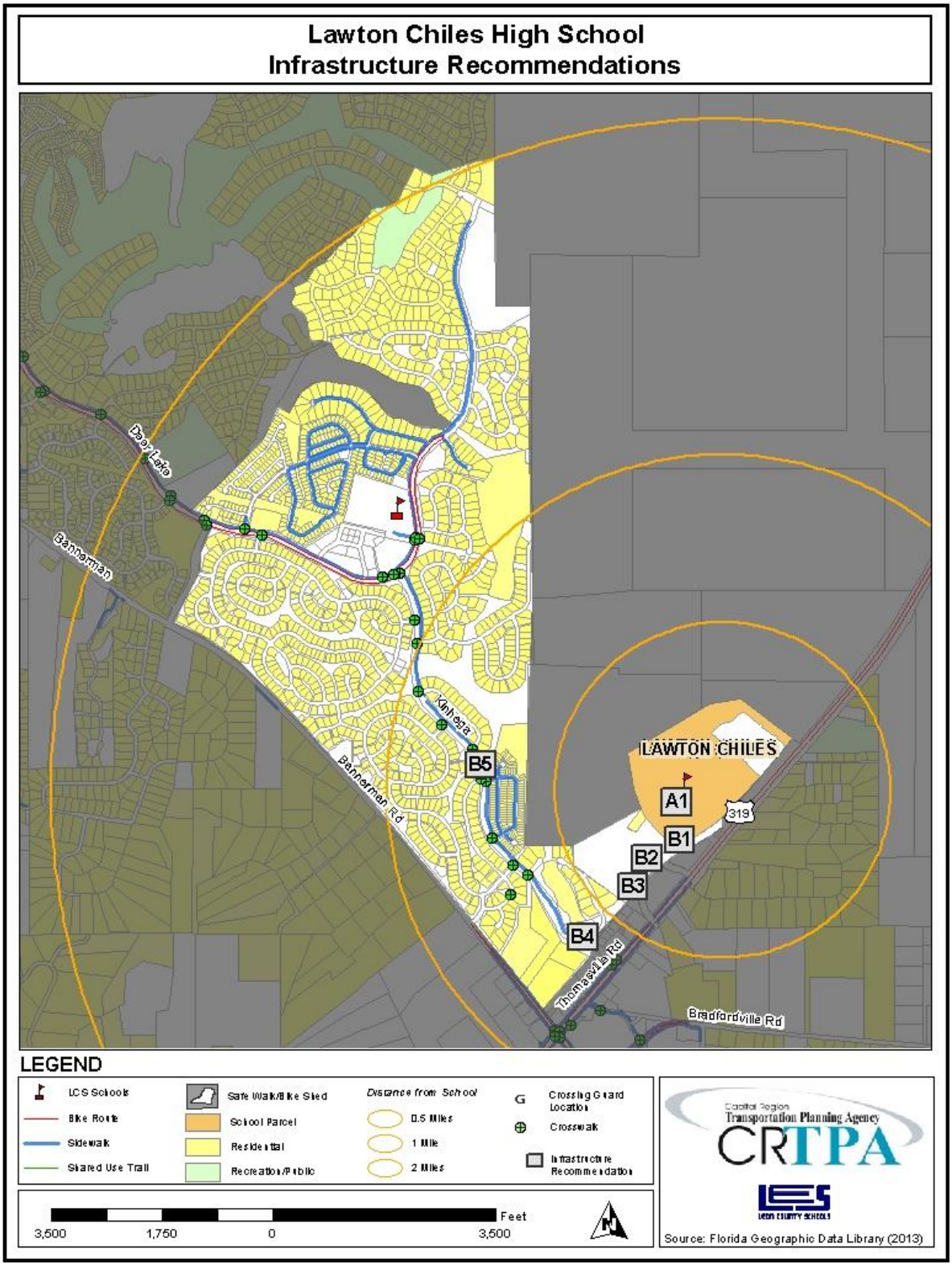
B1) Add Striped Crosswalk - school bus zone entrance/exit driveway, north of Lawton Chiles Lane to aid students walking and bicycling to and from the western direction.

B2) Sidewalk Tree Maintenance – While not infrastructure related, trees near the sidewalk, on the north side of Lawton Chiles Lane, needs to be cut back (where necessary) to allow adequate room for pedestrians and bicyclists commuting along the sidewalk.

B3) Install 'School Entrance' signs and 'School' pavement markings - on Lawton Chiles Lane just east of Rhea Road; this will help remind students and parents to slow down as they near the school entrance.

B4) Add Striped Crosswalk (including signage) – at the intersection of Kinhega Drive & Beech Ridge Trail; currently, a sidewalk is only available along one side of Kinhega Drive. A designated crosswalk near the school will allow students a safer crossing from the sidewalk side of Kinhega to Beech Ridge Trail.

B5) Install Additional Lighting Fixtures – along Kinhega Drive from Beech Ridge Trail to Deer Lake South every 100' or where determined is appropriate; Commuting times for high-schoolers are during the early morning hours when it is often still dark outside. Providing lighting will help provide a better sense of security for students walking/bicycling along Kinhega.


Lawton Chiles High School
Infrastructure Recommendations
Deep Lake
Bannerman
Kinhega
Bannerman Rd
LAWTON CHILES
A1
B1
B2
B3
B4
B5
319
Thomasville Rd
Bradfordville Rd
LEGEND
LCS Schools
Bike Route
Sidewalk
Shared Use Trail
Safe Walk/Bike Shed
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Crossing Guard Location
Crosswalk
Infrastructure Recommendation
Feet
3,500
1,750
0
3,500
Capital Region Transportation Planning Agency
CRTPA
Source: Florida Geographic Data Library (2013)

Programs

C1) Walk and bicycle encouragement literature – Send home literature to parents, as well as make it available on the school website, about the benefits of children walking and bicycling to school. Information and statistics from the National Safe Routes to School organization can be used to highlight health and safety benefits. The literature provided to parents should highlight some specific examples of how parents and the community can make walking and bicycling to school safe

C2) Student Carpool – Send home literature to parents and students about the benefits of carpooling to and from school. Additionally, suggest that students who participate in the off-campus lunches carpool to and from their dining destinations, if possible.

Policies

D1) Bike check and security – School policies to discourage theft and encourage bicycle riding could include having a school official or parent volunteer at the bike rack in the morning and afternoon to monitor students parking their bikes. The existing bike rack is in a relatively secure, visible spot; however, theft/security of bicycles is still a concern amongst parents. The school should consider investing in basic, school-owned bike locks that can be applied when students check-in. By having locks available at school, students do not need to remember to bring one each day. Basic locks can be purchased fairly cheap.

D2) Parent drop-off/pick-up zone protocol – Setting protocol for the parent drop-off/pick-up process improves the traffic conditions and creates a safer environment for automobiles, as well as, pedestrians and bicyclists.

Drop-Off Procedures

- Please stay in vehicle and pull forward to the front of the parent drop-off/pick-up zone.
- Please continue to queue the line for parent drop-off through the student parking lot, but please do not aisles.
- If you must enter the school, please park your vehicle in the parking lot out front. Do not park in the parent drop-off/pick-up zone as this will delay others trying to drop-off their students.

Pick-Up Procedures

- Please stay in vehicle and pull forward to the front of the parent drop-off/pick-up zone.
- Please continue to queue the line for parent pick-off through the student parking lot, but please do not block aisles.
- As soon as your child(ren) are securely in the car with their belongings, pull forward and exit the drop-off/pick-up zone so that other cars may pull forward and pick up their students.
- If you must enter the school, please park your vehicle in the parking lot out front. Do not park in the parent drop-off/pick-up zone as this will delay others trying to pick-up their students.

D3) Increased enforcement during drop-off/pick-up times – Parents who use the school bus zone as a drop-off and pick-up zone for students should, first, be given warnings about the improper protocol. If the incidents continue to occur, parents should be cited. It is important to let parents know that enforcing automobile pick-ups/drop-offs in the school bus zone helps reduce the delay for buses and increase safety for the students.

D4) School-Specific Safe Routes Coordinator/Advisor – A school the size of Chiles High School could benefit from having a safe routes coordinator to help accomplish projects, jumpstart programs and implement polices to improve and diversify student commuting options and increase student safety. This role would not require a fulltime staff commitment to safe routes-related issues and needs and, thus, could possibly be performed by an existing school administrator or staff member. The safe routes coordinator would also advocate for improvements and changes before the School Board and other various agencies with transportation and funding responsibilities throughout the County. In addition, the safe routes coordinator could be assigned with seeking out potential funding sources and completing grant applications.

Planning-Level Cost Estimates

Planning-level cost estimates are included in the table, below. They are intended to be used as a guide. Specific, detailed cost estimates for individual projects will require closer assessment of project conditions and constructability at the time of improvement.

General Unit Cost Estimates[1]

Item	Assumptions	Unit	Average Unit Cost ($)
sidewalk	concrete sidewalk (5' wide)	linear foot	32
sidewalk	concrete sidewalk + curb (5' wide)	linear foot	150
shared-use path	multi-use trail – paved (at least 8' wide)	mile	481,140
shared-use path	multi-use trail – unpaved (at least 8' wide)	mile	121,390
pavement symbol	pedestrian crossing	Each	360
pavement symbol	shared lane/bicycle marking	each	180
pavement symbol	school crossing	each	470
paved shoulder	asphalt material	square foot	5.56
crosswalk	high visibility crosswalk (ladder or zebra striping)	each	2,540
crosswalk	standard parallel lines crosswalk	each	770
signage	bike route sign	each	160
signage	stop/yield sign	each	300
signage	no turn on red (standard metal sign)	each	220
signage	no turn on red (electronic sign)	each	3,200
signage	trail regulation sign	each	160
flashing beacon	standard beacon (system + labor/materials)	each	10,010
flashing beacon	rectangular rapid flashing beacon (system + labor/materials)	each	22,250
ped hybrid beacon	high intensity activated crosswalk (HAWK) signal	each	57,680
ped/bike detection	push button	each	350
signal	audible pedestrian signal	each	800
signal	countdown timer module	each	740
lighting	streetlight	each	4,880

[1] Bushell, M. A., Poole, B. W., Zegeer, C. V., & Rodriuez, D. A. (2013). *Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public.* Federal Highway Administration.

Chapter 7: Conclusion

Currently, Chiles High School does not have high walking and bicycling commuting rates for students. Overall, less than 1% of students commute to and from school by walking and no students are known to commute by bicycle. While this school zone is indeed extensive, there are certain, physical barriers that limit the ability to realistically and/or safely walk or bicycle to school within a reasonable distance, Thomasville Road is an obvious example. Additionally, many of the land uses near the school are non-residential and so there is limited housing in the areas north and east of the school. This is more of a system-wide transportation and geography issue outside the purview of this analysis. However, the issue could be further explored during any future school district boundary change considerations.

The second reason for low walking and bicycling rates to school was revealed from information garnered from the parent survey results as well as meetings with school representatives. Overall, when it comes to allowing their children to walk or bicycle to school, parents primarily expressed concerns for speeding vehicles, transportation outside of the school zone, the parent drop-off/pick-up area of school, and sidewalks/walking. However, parents indicated that having continuous and separated bicycle/pedestrian pathways, enforcing speed limits in school zones, availability of crossing guards, having a secure place to store bicycles, and having a greater adult presence along walk routes to school were factors that might influence their decision to allow their children to walk or bicycle to school.

For those students within a relatively safe walking and bicycling distance to school, opportunities to improve student walking and bicycling rates are rooted primarily in infrastructure improvements including but not limited to sidewalk projects, adding crosswalks, and lighting. Additionally, informational and educational programmatic solutions as well as policies that encourage walking and bicycle commuting have been provided. For students who will continue to commute by automobile as well as those outside of a safe walking and bicycling distance, policy suggestions are included in this audit report to address better management and enforcement within the parent drop-off/pick-up area.

While Chiles High School has a sizeable student population outside of a safe, reasonable walking and bicycling distance, there are measures for which the school can take that will help to improve walking and bicycling safety and increase non-motorized commuting rates for those students living west and northwest of the school.

Appendices

Appendix A: Student Travel Survey

Leon County Schools

STUDENT TRAVEL SURVEY

NAME OF SCHOOL: _____

Dear Teacher:
Your help is needed to assist with a school-wide survey of how students travel to and from school each day. Beginning Monday, for each day of that week, please record the number of children in your class that came to school by school bus, city bus, car, bicycle, or by walking. Please send the results back to the office on this form, along with your name and class grade, and number of students present each day.

Please follow the script below to gather the information from your students. (The students should only be raising their hands for one mode of travel):

1) If you walked to school today, raise your hand.
2a) If you rode a bicycle to school today, raise your hand.
b) If you used a bicycle helmet today, raise your hand.
3a) If you came in a car, with either your parents or with someone else, raise your hand.
b) If you used your seat belt in a car today, raise your hand.
4) If you came by school bus, raise your hand.
5) If you came by city bus, raise your hand.

Day of Week	Number of Students						
	Question 1	Question 2a/b		Question 3a/b		Question 4	Question 5
Day 1							
Day 2							
Day 3							
Day 4							
Day 5							

TEACHER'S NAME: _____ GRADE: _____

DATE: _____ NUMBER OF STUDENTS IN CLASS TODAY:_____

Please complete and return this form to the principal's office FRIDAY. This information will allow us to better plan ways for our children to get to and from school each day.

Note to Principals:
Please reproduce and distribute this form to all homeroom or 1st period teachers at your school. It is important that **all classes are surveyed on the same day**. Project consultants will collect all survey forms the following week. THANK YOU.

Capital Region Transportation Planning Agency

Appendix B: Student Travel Survey – Detailed Analysis

The survey consisted of a one-page sheet with a script of questions for homeroom teachers to read to students as they took morning attendance. Surveys were conducted each morning during a typical week of the school year for a total of five straight days, Monday to Friday. The script prompted teachers to ask and record the number of children in their class that came to school by walking, bicycling, car, school bus, or city bus. The student travel survey was conducted in March, 2013. Twenty-one classrooms participated in the survey for a total of 383 student responses recorded. Student travel survey results were tabulated and analyzed for the school as a whole.

SUMMARY OF STUDENT TRAVEL SURVEY POPULATION

Total Number of Participating Classrooms	21
Total Students Surveyed (9th – 12th)	383

Walking and Bicycling

Students were first asked if they walked to school. Then students were asked if they rode a bicycle to school. Students that rode their bike to school were further asked if they wore a bicycle helmet.

School-Wide Travel Patterns

The school-wide student travel surveys indicate that the walk-to-school average for the week ranged from <1% to 1%, with an overall average of less than one percent. None of the students surveyed reported biking to school. In total, the combined walk-bike average for the week ranged from <1% to 1%, with an overall average of less than one percent.

SUMMARY OF WALKING AND BICYCLE SCHOOL-WIDE TRAVEL PATTERNS

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	<1 %	0 %	N/A	<1 %
Highest Day	1 %	0 %	N/A	1 %
Lowest Day	<1 %	0 %	N/A	<1 %

Bus and Automobile Drop-Off

Students were asked if they arrived to school by automobile, with either their parents or someone else. Students that arrived by automobile to school were further asked if they had wore their seat belt. Additionally, students were asked if they arrived to school by bus, including either Leon County School buses or Star Metro public transit buses.

Bus and Automobile School-Wide Travel Patterns

The school-wide student travel surveys indicate that the automobile-to-school average for the week ranged from 91% to 93%, with an overall average of 92%. Of the students that ride to school in an automobile, an overall average of 95% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 7% to 9%, with an overall average of 8%. None of the students surveyed reported riding a public bus to school.

SUMMARY OF BUS AND AUTOMOBILE DROP-OFF SCHOOL-WIDE TRAVEL PATTERNS

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	92 %	95 %	8 %	0 %
Highest Day	93 %	97 %	9 %	0 %
Lowest Day	91 %	93 %	7 %	0 %

Appendix C: Parent Survey

Leon County Schools

PARENT SURVEY

Dear Parents: In an effort to improve traffic safety in and around our schools, we are looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions. **The name of my child's school is**: _____.

1. Please provide the sex, age and grade of your child:

Sex: Male Female
Age: _____
Grade: _____

2. Approximately how far do you live from your child's school? *(circle closest answer):*

1. 1/2 mile or less
2. 1/2 mile to 1 mile
3. between 1 and 2 miles
4. over 2 miles

If you live over two miles from the school, please stop here and turn in your survey. Thank you for participating. If you live within two miles of the school, please help us by completing the questions on the following pages.

3. How does your child usually go to and from school: (*place a check on the appropriate line*)

	In the morning?	In the afternoon?
a. School bus	_____	_____
b. Car	_____	_____
c. Walk	_____	_____
d. Bicycle	_____	_____
e. City bus	_____	_____
f. Other (please explain)	_____	_____

4. Please identify specific safety problems of concern to you in your neighborhood or around your child's school *(i.e. broken sidewalks, crime areas, high-speed vehicles, etc.)* and indicate the street locations:

_____
_____
_____

Capital Region Transportation Planning Agency

Leon County Schools

5. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. On a scale of 1 to 5 (1= not important to 5= very important), please rate each statement's importance as it applies to your child. If the statement does not apply, circle "NA".

I would allow my child to walk or bicycle to school more often if:	Not Important				Very Important	Not Applicable
a) Accompanied by other children	**1**	**2**	**3**	**4**	**5**	**NA**
b) Accompanied by myself or other parents	**1**	**2**	**3**	**4**	**5**	**NA**
c) Schools provided more walking and bicycling safety training for students	**1**	**2**	**3**	**4**	**5**	**NA**
d) Additional crossing guards were provided at busy intersections	**1**	**2**	**3**	**4**	**5**	**NA**
e) Crossing guards were more effective	**1**	**2**	**3**	**4**	**5**	**NA**
f) There were continuous sidewalks or bike paths from my neighborhood to school	**1**	**2**	**3**	**4**	**5**	**NA**
g) There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school	**1**	**2**	**3**	**4**	**5**	**NA**
h) We lived closer to school	**1**	**2**	**3**	**4**	**5**	**NA**
i) Speed limits were strictly enforced in school speed zones	**1**	**2**	**3**	**4**	**5**	**NA**
j) School speed zones were marked with flashing signs	**1**	**2**	**3**	**4**	**5**	**NA**
k) School speed zones were a greater distance surrounding school	**1**	**2**	**3**	**4**	**5**	**NA**
l) The school provided a secure place for storing bicycles	**1**	**2**	**3**	**4**	**5**	**NA**
m) There was a greater adult presence of parent volunteers or police officers along walk routes to school	**1**	**2**	**3**	**4**	**5**	**NA**
n) There was better street lighting along walk routes to school	**1**	**2**	**3**	**4**	**5**	**NA**
o) Please write below any additional factors that might influence you to let your child walk or bicycle to school more often:						

_____

_____

_____

_____

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Appendix D: Parent Survey – Detailed Analysis

The survey consisted of a one-page double-sided sheet of paper with five questions for parents to answer. Survey copies were sent home with students early in the week. They were instructed to deliver the survey to their parents (or guardians), asking them to complete the survey and send it back with their children by the end of the week.

Parents were first asked general demographic questions pertaining to the sex and age of their child, as well as grade level. Then, parents were asked approximately how far they lived from their child's school. Families living over two miles from school were instructed to return the survey without completing the remainder of questions pertaining to walking and bicycling to school. Those claiming to reside within two miles were asked, next, how their child typically gets to and from school (for morning and afternoon, respectively). Then, they were asked to identify any safety problems of concern in their neighborhood. Finally, parents were asked to consider a range of safety and convenience factors, and how each factor might influence their decision to allow their child to walk or bike to school.

The parent surveys were conducted during the winter/spring semester of 2013. There were 70 parent surveys returned. Of those, 11 (16%) claimed to reside within the theoretical two-mile walk/bike radius of the school.

SUMMARY OF PARENT SURVEY PARTICIPATION

Total Enrollment	1,937
Total Number of Parent Surveys	70
Total Number within 2 Miles	11
Percentage of Surveys within 2 Miles	16 %

Commuting to/from School

Parents were asked how their child usually traveled to and from school, in the morning and afternoon. Choices of travel modes included: school bus, car, walk, bicycle, public bus, and other (where they were asked to explain).

SUMMARY OF SCHOOL-WIDE COMMUTING RESULTS

Morning	Average Overall
Car	91 %
School Bus	9 %
Walk	0 %
Bicycle	0 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	55 %
School Bus	36 %
Walk	9 %
Other	0 %
Bicycle	0 %
Public Bus	0 %

Neighborhood Safety Concerns

Parents were asked to identify specific safety problems of concern in their neighborhood or around their child's school including problems such as broken sidewalks, crime areas, high speed vehicles, etc.). They were also asked to indicate specific street locations, where possible. Parents provided answers anecdotally. Summaries of the top neighborhood safety concerns are provided.

SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	5
Issues with Transportation Outside of School Zone	2
Issues with Parent Drop-Off/Pick-Up	1
Issues with Sidewalks/Walking	1

Factors Influencing Decisions to Allow Students to Walk or Bicycle to School

Parents were asked about 15 different factors related to their children walking or biking to school. Parents rated each statement's importance on a scale of 1 to 5 (1=Not Important to 5=Very Important), as it applied to their child, to determine what influenced their decision to allow their child to walk or bike to school. If statements did not apply, parents marked N/A (Not Applicable).

SUMMARY OF TOP RANKING SCHOOL-WIDE INFLUENTIAL FACTORS RESULTS

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 There were continuous sidewalks or bike paths from my neighborhood to school		*2*	*0*	*0*	*0*	*8*	1
#2 Speed limits were strictly enforced in school speed zones		*2*	*0*	*1*	*1*	*6*	1
#3 Additional crossing guards were provided at busy intersections		*2*	*0*	*1*	*2*	*5*	1
#3 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school		*2*	*0*	*0*	*2*	*5*	2
#3 The school provided a secure place for storing bicycles		*3*	*0*	*0*	*2*	*5*	1
#3 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*3*	*0*	*0*	*2*	*5*	1
#3 School speed zones were marked with flashing signs		*2*	*0*	*1*	*1*	*5*	1