August 2014

Safe Routes to School Audit Report
Bond Elementary School

Leon County
Public Schools

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Acknowledgements

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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)

Prepared By:

RENAISSANCE PLANNING GROUP

WENDY GREY LAND USE PLANNING LLC

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

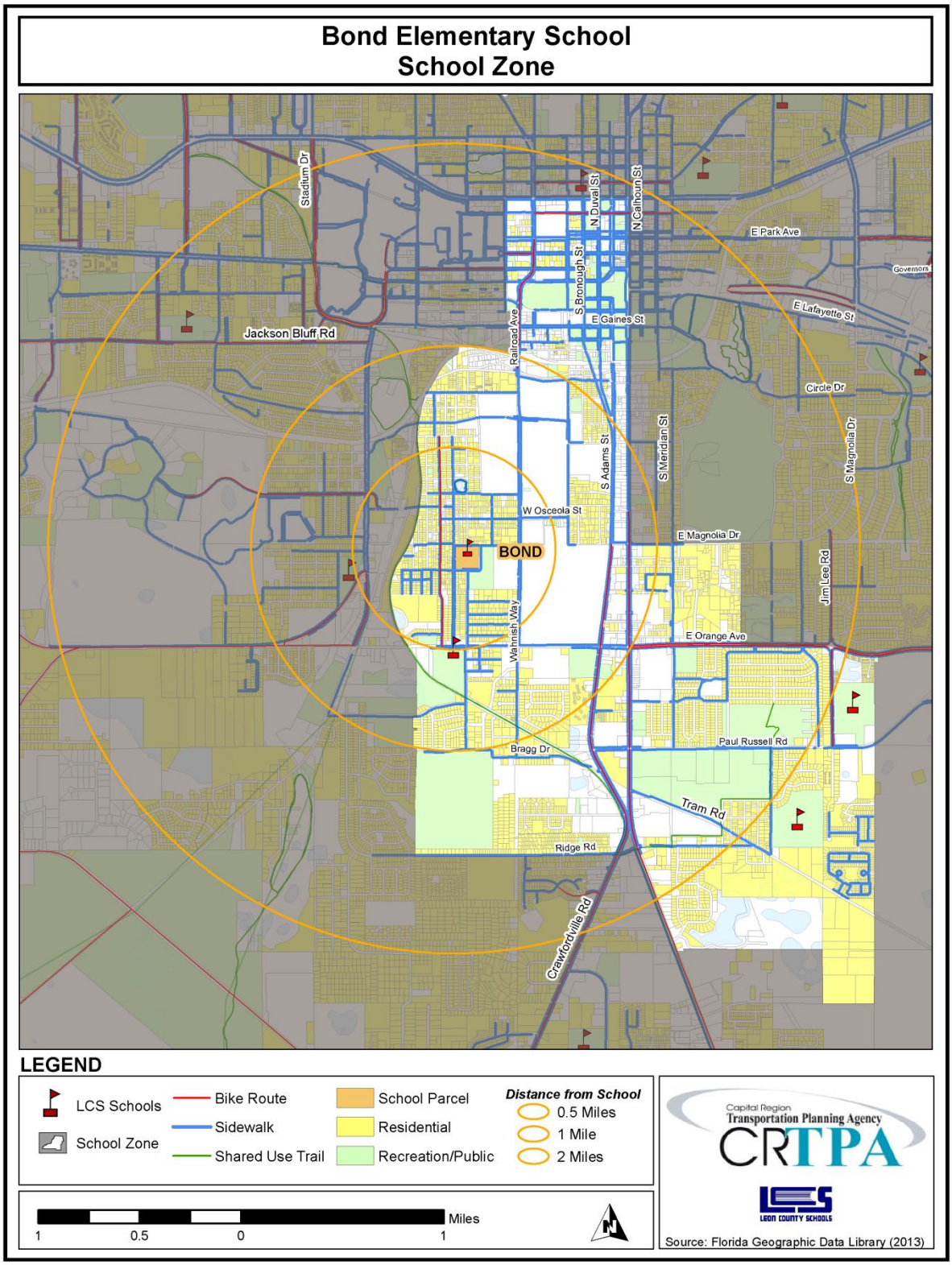
Bond Elementary School is located at 2204 Saxon Street, Tallahassee, 32310 in Leon County, Florida. It is part of the Leon County Public Schools system. Bond Elementary School traces its history back to 1935 when classes first began. Over the years, since then, the school has grown in size to accommodate the increasing number of students. Regular school hours are from 8:30am to 2:50pm, but this year school hours were extended to 3:35pm.

The number of students enrolled at the school, for the 2013 school year, was 608. The school has a current capacity for 790 students. The school includes grade levels Pre-Kindergarten through 5th Grade.

Students attending this school feed into Cobb, Fairview, and Nims Middle Schools and either Rickards or Leon High Schools.

School Zone

The Bond Elementary school zone encompasses the Capital Cascades neighborhood of Tallahassee and the south end of downtown. Florida A&M University campus is east of Bond Elementary school along Wahnish Way and covers a significant amount of land within the school zone. In addition to Florida A&M, land uses in the school zone consist of mostly residential, recreation and community service-type uses. The presence of a major university in the neighborhood influences the demographic makeup of the area, with a significant amount of housing occupied by college students. The Bond school zone includes three major roadways. Orange Avenue bisects the zone from north to south. Adams Street and Monroe Street run north-south mostly parallel to one another through the school zone and further divide the zone from east to west. Nims Middle School falls within the Bond school zone on Orange Avenue. Important recreation facilities within the school zone include Jake Gaither Community Center, North Florida Fair Grounds, Jack L McLean Community Center, and the Walker-Ford Community Center. The St. Marks Historic Railroad State Trail is an important non-motorized off-road transportation amenity that traverses the south and west side of the school zone, connecting downtown Tallahassee and south Leon County.


Bond Elementary School
School Zone
Stadium Dr
N Duval St
N Calhoun St
E Park Ave
Governors
S Bronough St
E Lafayette St
E Gaines St
Jackson Bluff Rd
Railroad Ave
Circle Dr
S Adams St
S Meridian St
S Magnolia Dr
W Osceola St
E Magnolia Dr
BOND
Jim Lee Rd
Wahnish Way
E Orange Ave
Paul Russell Rd
Bragg Dr
Tram Rd
Ridge Rd
Crawfordville 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
1
0.5
0
1
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 Friday, February 22, 2013. The weather was mostly overcast and/or rainy with temperatures in the mid 60 degrees Fahrenheit.

Highlights and Key Observations of On-Site Meeting

During this visit, Bond Elementary 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, safety patrols, and traffic education. Additionally, before- and after-school programs provided for students were discussed.

It was noted that flashing lights (i.e., school zone warning lights) are located along both Saxon Street and Campbell Street; however, they don't always work and drivers don't always obey the signs/signals. There is concern with speeding automobiles along Campbell Street. Also, there are speed humps along Saxon Street, in front of the school property. School administrators are working to have a perimeter fence and restrictive access gates installed due to safety and security concerns at the school. Students are permitted to arrive to school as early as 7:45am. Immediately south of campus is the Smith-Williams Service Center and Walker-Ford Community Center. Smith-Williams has an after-school enrichment program for K-5th grade students; and Walker-Ford offers program activities for all ages, including preschoolers.

There is one designated crossing guard at the intersection of Tucker Street and Holton Street. School staff supervises the crossing on Campbell Street. School staff and administrators serve as ushers for students at both the automobile drop-off/pick-up and school bus zones. The student safety patrol assists with these functions as well. School representatives expressed concern with the lack of use of car seat restraints (e.g., seat belts, booster seats, etc.) among students arriving to school in the morning. The school along with the school's Safety Resource Officer (SRO) has worked to educate students and parents on this problem, but have seen few changes in behavior.

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.

While the school is located in an older, higher density neighborhood, the surrounding housing is heavily university student oriented, so children commute from further away, outside of a safe walking or bicycling distance. As a result, there are a limited number of students that walk or bicycle to/from school, as many must rely heavily on school busing and automobile rides. Walkers and bicyclists can enter campus from both Saxon Street and Campbell Street. Hardly any students are known to commute via bicycle. This is believed to be due, in part, to parent concerns regarding safety (accident) and

potential bicycle theft. The school has four small bicycle racks; there were no bicycles parked during the site visit.

The school bus drop-off and pick-up zone mostly functions adequately. There are ushers to help guide students arriving and departing school with minimal difficulty and conflict. The zone for arrival and departure is mostly covered and leads to the school cafeteria where students congregate before class.

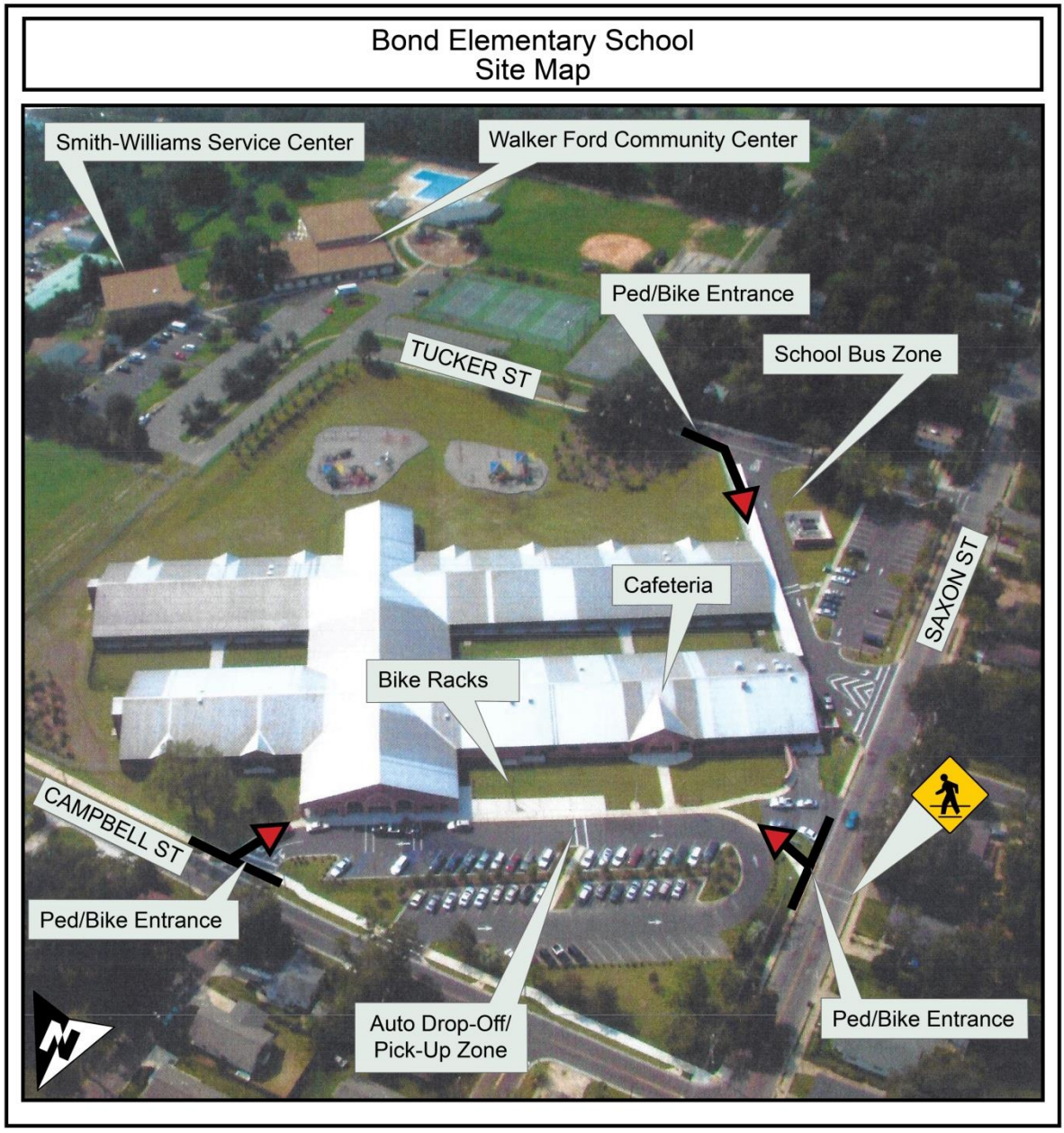
The parent drop-off and pick-up zone functions inadequately to accommodate the volume of automobiles entering and exiting the site. The automobile circulation area here is limited due to the configuration of the school property along with need to accommodate staff and visitor parking. Also, there are reports of drivers not obeying the rules and directions for student drop-off/pick-up, which further aggravates the situation. Some drivers reportedly drop-of students along the side of the roadway or in undesignated locations on school grounds, leaving children to walk through the busy parking lot and congested circulation line. (The school's Safety Resource Officer (SRO) suggested reversing the circulation route to help improve the flow of traffic and safety.)

Inventory Map

An aerial photograph showing Bond Elementary School is located on the following page. As shown in the photo, the school fronts the corner of Saxon Street and Campbell Street. Students can access campus from either of these streets as well as Tucker Street, behind the school. Bicycle parking racks are located near the front entrance of the school.

Standard width sidewalks are located along both sides of Saxon Street and there is a midblock crosswalk that connects directly to a sidewalk that enters onto campus. The school-side of Campbell Street includes a generously wide sidewalk for the entire length of the school property; however, there is no sidewalk along the opposite side of the street. Also, there are no crosswalks connecting the three intersecting residential streets (Saxon Street, Flipper Street and Pasco Street) at Campbell Street, opposite the school property. Tucker Street is located along the back of the school and functions more like a long driveway that connects and dead-ends into the Smith-Williams Service Center and Walk Ford Community Center. There are sidewalks along both sides of Tucker Street.

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 at separate driveways along Campbell Street. Visitor and staff parking spaces are located in this area as well. The bus drop-off and pick-up zone is separately located along the side of the school at the corner of Saxon Street and Tucker Street. Buses enter the zone from Tucker Street and exit onto Saxon Street. Staff parking spaces are located in this area as well. Students congregate in the cafeteria before school begins and prior to pick-up.


Bond Elementary School
Site Map
Smith-Williams Service Center
Walker Ford Community Center
Ped/Bike Entrance
School Bus Zone
TUCKER ST
Cafeteria
SAXON ST
Bike Racks
CAMPBELL ST
Ped/Bike Entrance
Auto Drop-Off/
Pick-Up Zone
Ped/Bike Entrance

Issues and Opportunities

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

Geography is the primary issue with students' ability to walk and bicycle to school. The neighborhood includes a major university and much of the surrounding housing is occupied by college students, who tend not to have school-aged children. Further out from campus there are wide, busy roadways that may not be appropriate for crossing by elementary school children, especially those at lower grade levels. These kind of external factors are often too 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 Campbell Street. Traffic calming measures should be explored to reduce automobile speeds and increase awareness of children in the area, especially during school commuting times. Also, school-related and –supportive committees such as the 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 behavior and protocol within the parent drop-off/pick-up zone, as well as the importance of car seat restraints for school-aged children. Furthermore, with specific regard to the parent drop-off/pick-up zone, the school should explore new ways to better manage function and increase safety in this area. Based on the site visit, however, it appears the possibility to reverse the circulation pattern would most likely result in traffic backups and potential blocking of through traffic along Campbell Street, thus creating additional problems. 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 Kindergarten through 5th 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**.)

Student travel survey results were counted and grouped by grade level. They were analyzed for the school as a whole as well as by grade level groupings of Kindergarten through 2nd Grade, and 3rd Grade through 5th Grade, respectively. (A detailed description of the analysis by mode for the two grade level groupings can be found in **Appendix B**.)

The survey indicates that the majority of students at Bond Elementary School – approximately one out of two students – are dropped-off at school by car. The percentage rises slightly for younger-aged children, which is not uncommon. Riding a school bus and walking to school ranked second and third place at approximately 36 percent and 15 percent of students, respectively. Of those commuting by school bus, the percentage was slightly higher for older-aged children. Surprisingly, the percentages of younger and older children walking to school are about equal, with approximately one-in-six students walking from each cohort. While this number could potentially be increased with the right combination of programs, policies and infrastructure upgrades, the current rate of students walking to school establishes a solid foundation for improvement. A low percentage of students, less than one, reported biking to school and only one percent of students arrived to school by public bus.

SUMMARY OF SCHOOL-WIDE RESULTS

	Walk	Bicycle	Automobile	School Bus	Public Bus
Average Overall	15 %	<1 %	48 %	36 %	1 %

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 Kindergarten through 2nd Grade and 3rd Grade through 5th Grade, respectively. (A detailed description of the parent surveys for the two grade level groupings can be found in **Appendix D**.)

The surveys of students living within two miles from the school indicate that a greater percentage of Bond Elementary School students are dropped off by car or walk to school in the morning, while fewer return home by the same modes in the afternoon. In the afternoon, there are greater percentages of students returning home by another mode not described specifically in the survey such as an after-school program van. Overall, approximately one-quarter of students commute to and from school by walking.

With regard to neighborhood safety, two concerns were generally agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th. Survey respondents overall showed concerns for the behavioral patterns of automobile drivers, generally, in terms of excessive driving speeds and issue with crime in the area. As for speeding complaints, specific problem locations cited include Polk Drive, Texas Street, and near the intersection of Orange Avenue & Pasco Street.

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 enforcing speed limits and having flashing lights in school zones, accompanying children (by themselves/other parents), and having a greater adult presence along routes to school were mutually agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th.

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 Bond Elementary 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 Bond Elementary School.

Character of Neighborhood Area

Bond Elementary is located in an established neighborhood primarily comprised of higher density single family homes. The neighborhood has a well connected pattern of mostly gridded streets which contributes to the school's accessibility. In the area directly surrounding the school, bike-ped connectivity is good. The grid layout, slower speed limits, and sidewalk infrastructure make this area a comfortable space to walk and bike. Because of the schools proximity to the Florida A&M University campus, there is a strong university student presence on residential streets near Bond. This results in longer travel distances for many kids attending Bond because they live further away. The west portion of the school zone is bound by a historic railway, which has been converted into a shared use trail.

Major roadways in the school zone include:

- Orange Avenue, a heavily traveled two-lane, east-west roadway with a posted 35 mph speed limit.
- Adams Street, a north-south roadway with a 35 mph speed limit. It transitions from two lanes to four lanes south of Orange Avenue.
- Monroe Street, a north-south four-lane roadway with a center turning lane. Monroe Street also has a 35 mph speed limit.

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, 7:00A to 9:30A and 1:50P to 4:20P, and school days, Monday to Friday, were examined.

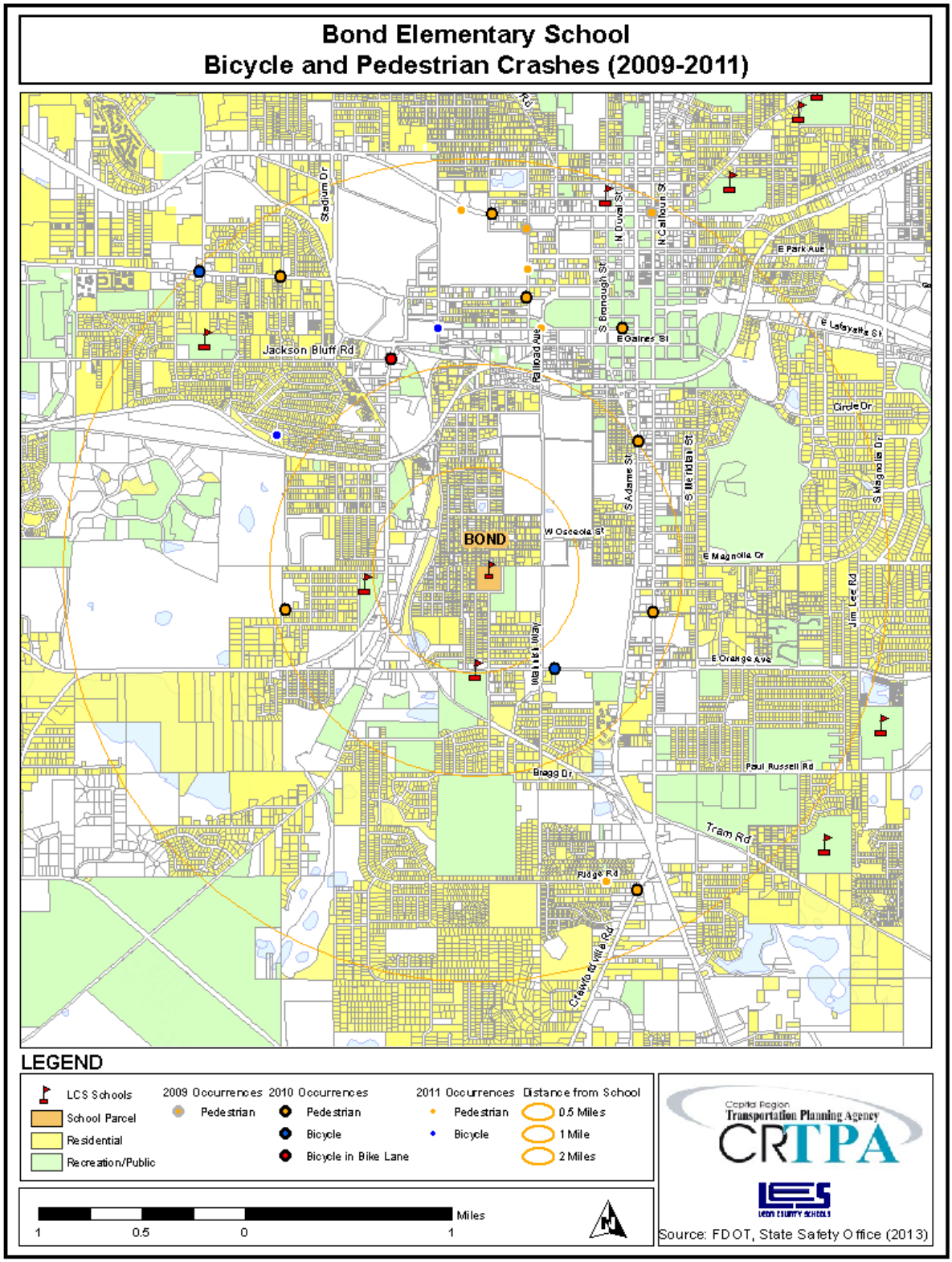
There were a total of 20 bicycle and pedestrian crashes that occurred within the theoretical two-mile walk/bike radius of Bond Elementary School. Of those total crashes, 8(40%) occurred during the morning hours and 12 (60%) occurred during the afternoon hours. A vast majority of the crashes involved adult pedestrians. However, there were a few incidents of crashes involving bicyclists and two incidents of child pedestrian crashes. Injuries were reported in all crashes except for two.

Most of the crashes occurred approximately 1 ½ to 2 miles north of Bond Elementary School, in an area mainly comprised of downtown Tallahassee and Florida State University campus. Streets in this area that tend to have high numbers of reported crashes are West Pensacola Street, West Madison Street,

and West Tennessee Street. Other roadways with reported crashes include West Orange Avenue, South Monroe Street, Crawfordville Road, and Ridge Road.

SUMMARY OF CRASH REPORTS (2009-2011)

Date	Time	Day	On Road	Nearest Intersection	Injury or Fatality?	Type of Crash	Person(s) Involved
01/09/09	3:02P	Friday	Tennessee St.	Monroe St.	Injury	Pedestrian	Adult
04/22/09	8:15A	Wednesday	Call St. W	Copeland St.	Injury	Pedestrian	Adult
03/16/10	9:09A	Tuesday	Daniels St.	Bruce Ln.	Serious Injury	Pedestrian	Adult
05/27/10	8:06A	Thursday	Madison St.	Duval St.	Injury	Pedestrian	Adult
08/26/10	8:03A	Thursday	Orange Ave.	Wahnish Way	Injury	Bicyclist	Adult
09/06/10	2:09P	Monday	Tennessee St.	Dewey St. N	Injury	Pedestrian	Adult
10/04/10	2:14P	Monday	Lake Bradford Rd.	Jackson Bluff Rd.	No injury	Bicyclist in Bike Lane	Adult
10/12/10	7:53A	Tuesday	Pensacola St.	Chapel Dr.	Injury	Pedestrian	Adult
10/20/10	7:10A	Wednesday	Crawfordville Rd.	Gaile Ave.	Injury	Pedestrian	Child
10/26/10	3:46P	Tuesday	Pensacola St.	Copeland St.	No injury	Pedestrian	Adult
10/29/10	3:46P	Friday	Ocala Rd. S	Pensacola St.	Injury	Bicyclist	Adult
12/03/10	3:32P	Friday	Putnam Dr.	Monroe St.	Injury	Pedestrian	Adult
12/29/10	3:12P	Wednesday	Adams St.	Jennings St.	Serious Injury	Pedestrian	Adult
01/11/11	2:35P	Tuesday	Academic Way	Academic & Territory Way	Injury	Pedestrian	Adult
01/18/11	2:40P	Tuesday	Block Glenda Dr.	1400	Injury	Bicyclist	Adult
01/19/11	3:43P	Wednesday	Copeland St.	College Ave.	Injury	Pedestrian	Adult
02/08/11	3:32P	Tuesday	Madison St.	Railroad Ave.	Injury	Pedestrian	Adult
02/16/11	4:05P	Wednesday	Madison St.	Woodward Ave. S	Injury	Bicyclist	Adult
04/29/11	8:10A	Friday	Duval St.	Madison St.	Injury	Pedestrian	Adult
09/09/11	8:07A	Friday	Ridge Rd.	State St.	Injury	Pedestrian	Child


Bond Elementary School
Bicycle and Pedestrian Crashes (2009-2011)
BOND
Jackson Bluff Rd
Stadium Dr
N Duval St
N Calhoun St
E Park Ave
S Bronough St
E Gaines St
E Lafayette St
Railroad Ave
Circle Dr
S Adams St
S Meridian St
S Magnolia Dr
W Osceola St
E Magnolia Dr
Jim Lee Rd
E Orange Ave
Main Library Way
Bragg Dr
Paul Russell Rd
Tram Rd
Ridge Rd
Crawfordville Rd
LEGEND
LCS Schools
School Parcel
Residential
Recreation/Public
2009 Occurrences
Pedestrian
2010 Occurrences
Pedestrian
Bicycle
Bicycle in Bike Lane
2011 Occurrences
Pedestrian
Bicycle
Distance from School
0.5 Miles
1 Mile
2 Miles
Miles
1
0.5
0
1
Capital Region Transportation Planning Agency
CRTPA
Leon County Schools
Source: FDOT, State Safety Office (2013)

Neighborhood Assessment

The overall neighborhood layout surrounding Bond Elementary School lends itself well to walkability. The well connected gridded street network allows for multiple route choices to access the school. In addition, there is a fairly comprehensive existing sidewalk infrastructure throughout the immediately adjacent neighborhood streets, but it is beginning to show its age and could use general repair and updating throughout. Further away for Bond, outside of a half-mile radius of the school, the sidewalk network generally continues on at least one side of the road uninterrupted to most residential areas within the school zone. Although the infrastructure reaches some neighborhoods further away, much of it is along the major roadways and, thus, poses, safety concerns for elementary-aged children walking and 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 Bond Elementary School walk/bike shed map is included at the end of this chapter.

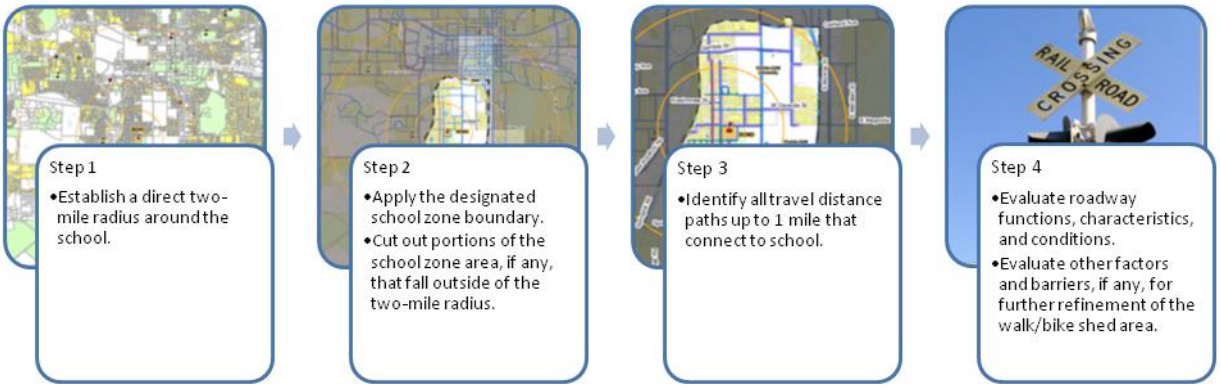
The walk/bike shed area and associated map are not meant to suggest that elementary school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, younger children such as kindergarten students are not expected to walk or bike to school from practically any distance without the accompaniment of either a parent or much older sibling. Also, older children such as 5th graders 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 Bond Elementary School mostly extends to the west and southwest limits of the school zone. Adams Street with its limited crossing points, four undivided lanes of traffic and lack of pedestrian accommodations forms the eastern limits of the walk/bike shed. Also, because Orange Avenue has high traffic volumes and is five lanes wide east of Wahnish Way, the area directly to the south is not included. There is an active railroad line approximately one mile north of the school. The associated railroad tracks combined with the few residential land uses to the north contribute to the northern limits of the walk-bike shed.

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 elementary school children 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 Unsignalized Crosswalk	More than 2 travel lanes	Greater than 25 mph	Greater than 1,500	N/A
Marked Crosswalk Signalized Crosswalk	Greater than 4 travel lanes	Greater than 40 mph	Greater than 2,000	N/A

Hazardous Walking Conditions, as defined per Florida Statute

Section 1006.23 of the Florida Statutes defines hazardous walking conditions for elementary school-aged students commuting to and from school. While these guidelines are useful, the scope and intent of the State's language are fairly general and broad. The standards are mostly liberally applied to extreme situations. For example, a four-foot wide 'surface sufficient for walking' that is only three feet in distance from the edge of a curb-less roadway with a 55 mph posted speed limit would likely not meet the required criteria, per State Statute, for hazardous walking conditions for elementary-aged students walking to or from school. Most experts would agree that such conditions as described are likely too challenging for elementary students to handle.

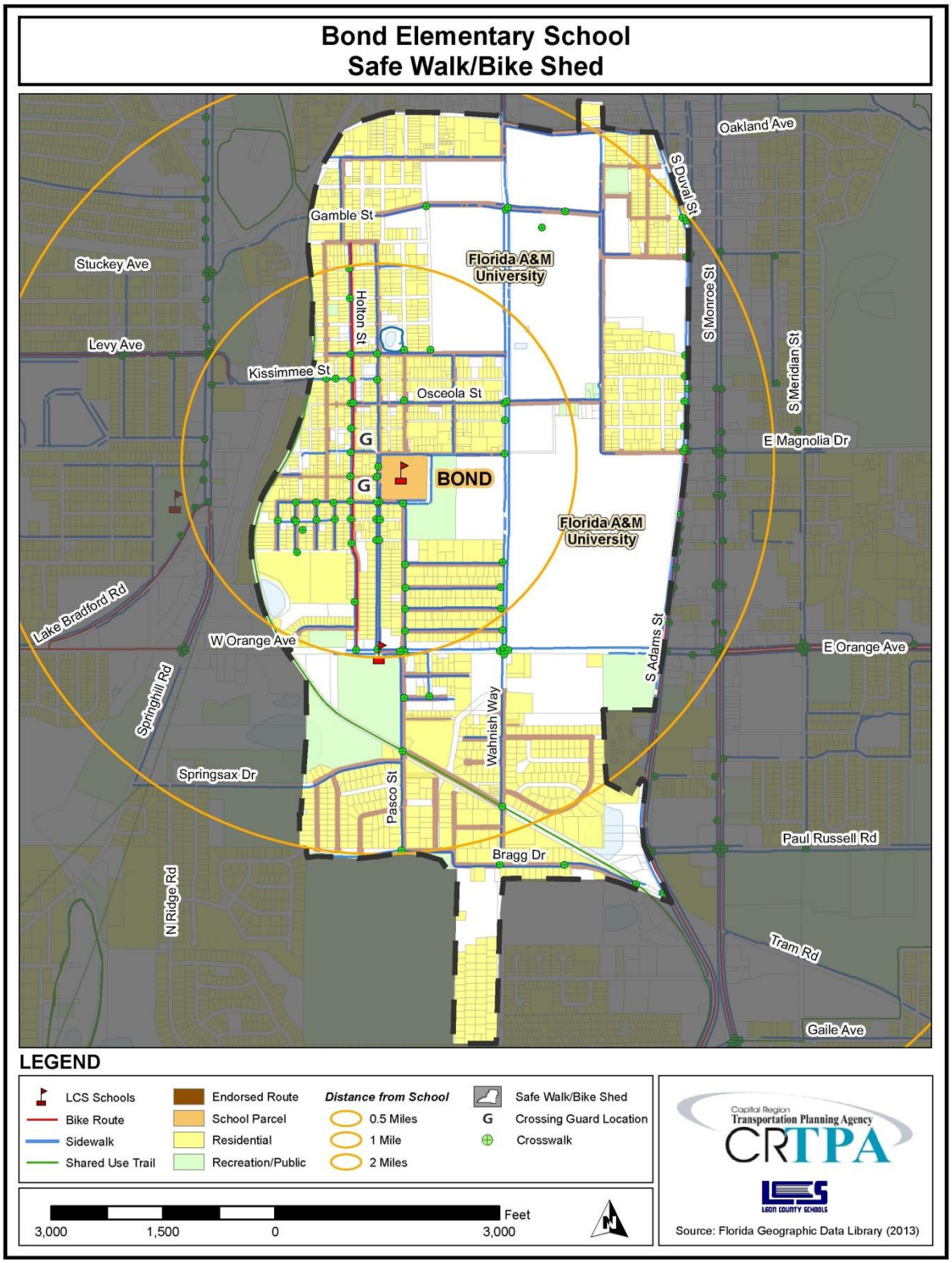
In determining a safe walking and bicycling area, this report applies a methodology and criterion that is more stringent than State standards and more in line with existing studies, research and opinions collected from numerous experts in the fields of pedestrian and bicycle transportation and safe routes to school planning. In addition, this report goes much further than simply identifying sidewalk/pathway

deficiencies; it also considers intersection conditions, pavement markings, signage, and a number of other attributes that can impact safe routes to school.

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


Bond Elementary School
Safe Walk/Bike Shed
Oakland Ave
S Duval St
Gamble St
Florida A&M University
Stuckey Ave
Holton St
S Monroe St
S Meridian St
Levy Ave
Kissimmee St
Osceola St
E Magnolia Dr
G
G
BOND
Florida A&M University
Lake Bradford Rd
W Orange Ave
S Adams St
E Orange Ave
Springhill Rd
Wahnish Way
Springsax Dr
Pasco St
Paul Russell Rd
Bragg Dr
N Ridge Rd
Tram Rd
Gaile Ave
LEGEND
LCS Schools
Bike Route
Sidewalk
Shared Use Trail
Endorsed Route
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Safe Walk/Bike Shed
G Crossing Guard Location
Crosswalk
3,000
1,500
0
3,000
Feet
Capital Region Transportation Planning Agency
CRTPA
LCS
LEON COUNTY SCHOOLS
Source: Florida Geographic Data Library (2013)

Chapter 6: Findings and Recommendations

The three existing points of access for walkers and bicyclists to Bond Elementary School provide efficient access onto campus from all directions. For those requiring automobile access, the situation could use improvement; however, due to property constraints and configuration, recommendations are limited here to the policy realm. Additional policy and programmatic recommendations that might help to increase safe walking and bicycling to and from school (and likewise provide some relief to both the car line and bus zone) are also included for the school's consideration.

The neighborhood surrounding Bond Elementary School has a well-connected street network. And while there are more streets without sidewalks than desirable, many of the streets are low-volume traffic resident streets that can be navigated by walkers and bicyclists with a fair amount of ease, depending in part on grade level and maturity. Still, there are a number of infrastructure recommendations that would provide much benefit toward improving existing conditions.

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 Bond Elementary School. They include both on- and off-site improvements as follows:

Bond Elementary School On- and Off-Site Recommendations

	Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1	Canopy over sidewalk	Campbell Street	N/A		North side of Bond campus	N/A	N/A	Parent drop-off/pick-up zone

	Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1	Stop Bar (restripe)	Campbell Street	Campbell Street and Saxon Street		West side of Saxon St	N/A	N/A	
B2	Crosswalk (incl signage)	Campbell Street	Campbell Street and Saxon Street		West side of Saxon St	N - S	N/A	Standards school crossing signage on both sides of Campbell St
B3	New Sidewalk	Campbell Street	East side of Saxon Street	West side of Main Street	North side of Campbell St	E - W	approx 900 feet	
B4	Crosswalk (incl signage)	Campbell Street	Approximately 300 feet west of Main Street		West of Main St	N - S	N/A	
B5	Sidewalk extension to multi-use trail	Taylor Street	St. Marks Historic Railroad State Trail	Taylor Street	North side of Taylor St. at western terminus of existing sidewalk	E - W	approx 20 feet	Create connection between trail and sidewalk on Taylor Street
B6	New Sidewalk	Taylor Street	East of St. Marks Street	West of Saxon Street	North Side of Taylor St	W - E	approx 900 feet	
B7	New Sidewalk	Wahnish Way	North of Dupont Drive	South of Orange Avenue	East side of Wahnish Way	N - S	approx 560 feet	
B8	New Sidewalk	Orange Avenue	East of Walnut Street	West of Wahnish Way	South side of Orange Ave	E - W	approx 930 feet	
B9	Crosswalk (incl signage)	Medical Commons Court	Medical Commons Court and Holton Street		West of Holton St	N - S	N/A	
B10	Assess and repair school zone warning lights	Saxon Street; Campbell Street	N/A		West and North side of Bond campus, respectively	N/A	N/A	

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

On-Site Recommendations

A1) Canopy over sidewalk at parent drop-off/pick-up zone – Much of this zone is currently uncovered and, thus, can cause discomfort and create inconveniences during times of inclement weather for students, parents and staff alike. Installing a canopy structure in this area, similar to those found at many other Leon County elementary schools, could improve the loading/unloading process and flow of traffic during these critical and sometimes stressful times of day.

Off-Site Recommendations

B1) Restripe stop bar on Campbell Street, west of Saxon Street

B2) Add a crosswalk with signage on Campbell Street, west of Saxon Street.

B3) Add a new sidewalk on the north side of Campbell Street from east of Saxon Street to west of Main Street.

B4) Add a crosswalk with signage on Campbell Street approximately 300 feet west of Main Street.

B5) Extend sidewalk to multi-use trail on north side of Taylor Street, at western terminus of sidewalk, to St. Mark's Historic Railroad State Trail.

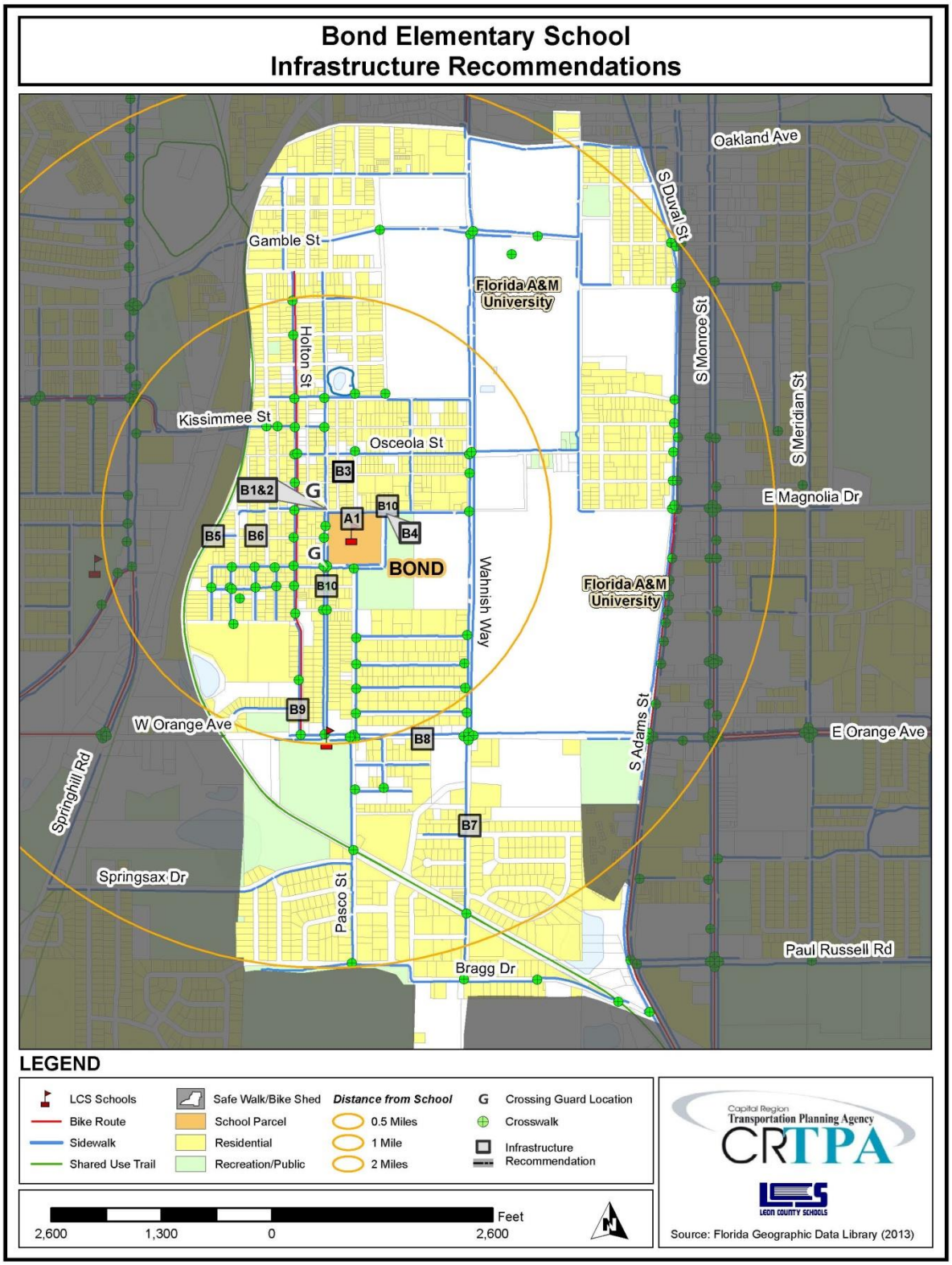
B6) Add a new sidewalk on north side of Taylor Street from east of St. Marks Street to west of Saxon Street.

B7) Add a new sidewalk on east side of Wahnish Way from north of Dupont Drive to south of Orange Avenue.

B8) Add a new sidewalk on south side of Orange Avenue from east of Walnut Street to west of Wahnish Way.

B9) Add a new crosswalk at the intersection of Medical Commons Court and Holton Street, west of Holton Street.

B10) Assess and repair school zone warning lights located along both Saxon Street and Campbell Street


Bond Elementary School
Infrastructure Recommendations
Oakland Ave
S Duval St
Gamble St
Florida A&M University
Holton St
S Monroe St
S Meridian St
Kissimmee St
Osceola St
B3
B1&2
G
B10
A1
B4
B5
B6
G
BOND
B10
Wahnish Way
Florida A&M University
E Magnolia Dr
B9
W Orange Ave
B8
S Adams St
E Orange Ave
Springhill Rd
B7
Springsax Dr
Pasco St
Paul Russell Rd
Bragg Dr
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
G Crossing Guard Location
Crosswalk
Infrastructure Recommendation
Feet
2,600
1,300
0
2,600
Capital Region Transportation Planning Agency
CRTPA
LEON COUNTY SCHOOLS
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 and fun. Examples of programs to promote walking and bicycling include encouraging parents to coordinate with other parents to establish walking and bicycling groups (i.e. buddy programs and walking school buses) to help ease safety concerns; participating in Walk/Bike to School Days; creating a mileage club where students or entire classrooms keep track of how much they walk or bike to school to compete for prizes or certificates; and encouraging families who normally drive to school to look for ways to safely and legally park in a parking lot away from school, but within walking distance, and then walk to school from the lot.

C2) Bicycle safety and accessibility workshop – Organize and hold a workshop or a bike rodeo that demonstrates bicycle safety topics, catered to younger children, such as bicycle hand signals, how to properly wear a bicycle helmet, and properly obeying traffic signs/signals. Parents and students should be reminded that under Florida Law, anyone under the age of 16 must wear a bicycle helmet. An on-campus bicycle obstacle course that covers skills such as avoiding obstacles, balancing at slow speeds, turning, and making emergency stops can be very helpful for young riders. Additionally, a group bicycle ride, through the neighborhood surrounding the school, can be a safe and fun way to get children more comfortable with their built environment and any obstacles they may encounter en route to school. Local community groups, as well as, Florida Agricultural & Mechanical University, Leon County Sheriff's Office, and Leon County Public Schools may be willing to donate time and/ or supplies such as bikes, helmets, and locks for workshops and rodeos if contacted.

C3) Parent drop-off/pick-up zone protocol encouragement– Send home literature to parents, as well as make it available on the school website, about the proper drop-off and pick-up process for the school, particularly at the start of a new school year or after an extended school break. Maps of the drop-off/pick-up zone, as well as, the traffic flow pattern can be very helpful to parents. The literature available to parents should remind them to be patient and courteous to other parent drivers and clearly discourage parents from letting children out in the parking lot before the drop zone, releasing them on the side of the road, or parking on the side of the road (to wait for their child). Providing small rewards, such as stickers or pencils, to students whose parents follow the proper drop-off/pick-up process is typically more beneficial than punishing improper behavior. If necessary, educational flyers could be placed on the windshields of vehicles illegally parked to remind parents of the proper rules and procedures.

C4) Car seat restraints (e.g. seat belts, booster seats, etc.) – Send home literature to parents, as well as make it available on the school website, about the proper use and type of car seat restraints needed by children of different ages and weights. Remind parents that car crashes are the

leading cause of death for children 1 to 13 years old in the United States.[1] Ideally, children should remain in the back seat at least until age 12. Periodically, send out reminders on this important issue and possibly get the Parent-Teacher Organization (PTO) involved to further spread the message to parents.

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 check-in and check-out students parking their bikes. The adult assigned to handle check-in and check-out will assist with locking the bike in the morning and will unlock the bike for the students in the afternoon. The existing bike rack is in a relatively secure, visible spot; however, theft is still a concern. 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 along Campbell Street/Saxon Street, but please do not block driveways.
- Please be prepared to promptly help your child(ren) exit the vehicle with their belongings upon arriving at the drop-off point. Someone will be outside to assist and direct children into school each morning.
- 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 children.

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 along Campbell Street/Saxon Street, but please do not block driveways.
- It is suggested that parents clearly and boldly write their child's name, classroom teacher, and grade level on a letter-sized sheet of paper and place it on the dash of their vehicle to assist staff and others in the parent pick-up zone. Please be prepared to promptly assist your child(ren) entering your vehicle at the pick-up point.
- 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 children.

[1] http://www.nhtsa.gov/Safety/CPS

- 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 children.

D3) Increased enforcement during drop-off/pick-up times – To assist parents in the drop-off/pick-up zone, school staff or others such as parent volunteers or safety patrols should be available to help open curb-side doors for students in both the morning and afternoon. This helps ensure that parents do not need to get out of their vehicles to assist students with their belongings. Ideally, it is best to have three or four assistants at a time to speed up the drop-off/pick-up process in a safe manner. Additionally, assistants should consider wearing bright vests or belts to help identify themselves to parents and assistants should also make sure they are at the drop-off/pick-up zone at their assigned times.

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[2]

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

[2] *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

While Bond Elementary School enjoys a well-connected roadway network consisting mostly of low-volume residential streets, it doesn't correlate to high walking and bicycling commuting rates for students. Overall, just over one-quarter of students commute to and from school by walking, while there are only a few (if any) bicycle commuters. There appear to be two primary reasons. First, a sizeable cohort of students attending Bond Elementary lives far from the school, outside of a safe, reasonable walking and bicycling distance. 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 with speeding vehicles and neighborhood crime. However, parents indicated that the presence of other adults as well as increased law enforcement during school commuting times 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 informational and educational programmatic solutions as well as policies that encourage bicycle commuting. 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. Recommended infrastructure improvements are centered primarily on sidewalk infill projects and adding crosswalks. This is mostly due to the already well-connected network of low-volume resident streets surrounding the school.

While Bond Elementary 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.

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 February, 2013. Thirty-four classrooms participated in the survey for a total of 618 student responses recorded. In a few instances, surveys were conducted within overlapping multiple grade level classrooms. Those instances are noted where relevant to the data results.

SUMMARY OF STUDENT TRAVEL SURVEY POPULATION

Total Number of Participating Classrooms	34
Total Students Surveyed (K-5th)	618
Total K-2nd Students Surveyed	324
Total 3rd-5th Students Surveyed	294

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.

Walking and Bicycling School-Wide Travel Patterns

The school-wide student travel surveys indicate that the walk-to-school average for the week ranged from 14% to 16%, with an overall average of 15%. Overall, the bike-to-school average for the week ranged from 0% to <1%, with an overall average of less than one percent. Of the students that bike to school, an overall average of 33% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 14% to 16%, with an overall average of 15%.

SUMMARY OF WALKING AND BICYCLE SCHOOL-WIDE TRAVEL PATTERNS

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	15 %	<1 %	33 %	15 %
Highest Day	16 %	<1 %	50 %	16 %
Lowest Day	14 %	0 %	0 %	14 %

Walking and Bicycling Travel Patterns of Younger-Aged Children (K – 2nd Grade)

The younger-aged (K-2nd) student travel surveys indicate that the walk-to-school average for the week ranged from 12% to 15%, with an overall average of 14%. Overall, the bike-to-school average for the week ranged from 0% to <1%, with an overall average of less than one percent. Of the students that bike to school, an overall average of 67% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 12% to 15%, with an overall average of 14%.

YOUNGER-AGED CHILDREN WALKING AND BICYCLE TRAVEL PATTERNS (K-2nd)

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	14 %	<1 %	67 %	14 %
Highest Day	15 %	<1 %	100 %	15 %
Lowest Day	12 %	0 %	0 %	12 %

Walking and Bicycling Travel Patterns of Older-Aged Children (3rd – 5th Grade)

The older-aged (3rd-5th) children student travel surveys indicate that the walk-to-school average for the week ranged from 15% to 17%, with an overall average of 16%. Overall, the bike-to-school average for the week ranged from 0% to <1%, with an overall average of less than one percent. Of the students that bike to school, none reported wearing a bicycle helmet. In total, the combined walk-bike average for the week ranged from 15% to 18%, with an overall average of 16%.

OLDER-AGED CHILDREN WALKING AND BICYCLE TRAVEL PATTERNS (3rd-5th)[3]

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	16 %	<1 %	0 %	16 %
Highest Day	17 %	<1 %	0 %	18 %
Lowest Day	15 %	0 %	0 %	15 %

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.

[3] Includes one K-3rd class and two K-5th classes

Bus and Automobile School-Wide Travel Patterns

The school-wide travel surveys indicate that the automobile-to-school average for the week ranged from 44% to 46%, with an overall average of 46%. Of the students that ride to school in an automobile, an overall average of 75% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 37% to 39%, with an overall average of 38%. The public bus-to school average for the week ranged from 0% to 1%, with an overall average of 1%.

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

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	46 %	75 %	38 %	1 %
Highest Day	46 %	76 %	39 %	1 %
Lowest Day	44 %	73 %	37 %	0 %

Bus and Automobile Travel Patterns of Younger-Aged Children (K – 2nd Grade)

The younger-aged (K-2nd) children student travel surveys indicate that the automobile-to-school average for the week ranged from 46% to 51%, with an overall average of 49%. Of the students that ride to school in an automobile, an overall average of 82% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 34% to 38%, with an overall average of 36%. The public bus-to school average for the week ranged from 1% to 1%, with an overall average of 1%.

YOUNGER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (K-2nd)

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	49 %	82 %	36 %	1 %
Highest Day	51 %	83 %	38 %	1 %
Lowest Day	46 %	79 %	34 %	1 %

Bus and Automobile Travel Patterns of Older Children (3rd – 5th Grade)

The older-aged (3rd-5th) children student travel surveys indicate that the automobile-to-school average for the week ranged from 40% to 43%, with an overall average of 42%. Of the students that ride to school in an automobile, an overall average of 65% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 39% to 44%, with an overall average of 41%. The public bus-to school average for the week ranged from <1% to 1%, with an overall average of 1%.

OLDER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (3rd-5th)[4]

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	42 %	65 %	41 %	1 %
Highest Day	43 %	66 %	44 %	1 %
Lowest Day	40 %	64 %	39 %	<1 %

[4] Includes one K-3rd class and two K-5th classes

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 97 parent surveys returned. Of those, 50 (52%) claimed to reside within the theoretical two-mile walk/bike radius of the school. Surveys from families residing within the theoretical two-mile walk/bike radius were split 50/50 by grade level grouping, with 25 students representing Kindergarten through 2nd Grade, and 25 students representing 3rd Grade through 5th Grade.

SUMMARY OF PARENT SURVEY PARTICIPATION

Total Enrollment	608
Total Number of Parent Surveys	97
Total Number within 2 Miles (K-2nd Grade)	25
Total Number within 2 Miles (3rd-5th Grades)	25
Percentage of Surveys within 2 Miles	52 %

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	44 %
Walk	28 %
School Bus	24 %
Bicycle	0 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	42 %
Walk	26 %
School Bus	24 %
Other	4 %
Bicycle	0 %
Public Bus	0 %

Commuting Patterns of Younger-Aged Children (K – 2nd Grade)

The surveys of parents of younger-aged (K-2nd grade) indicate that the car-to-school average for a typical week is 52% in the morning and decreases to 44% in the afternoon. The walk-to-school average for a typical week is 28% in both the morning and afternoon. The school bus-to-school average for a typical week is 16% in both the morning and afternoon. None of the students ride a bicycle or public bus in the morning or afternoon. Also, none of the students use an alternative commute mode in the morning, but 8% use an alternative commute mode in the afternoon.

COMMUTING PATTERNS OF YOUNGER-AGED CHILDREN (K-2nd)

Morning	Average Overall
Car	52 %
Walk	28 %
School Bus	16 %
Bicycle	0 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	44 %
Walk	28 %
School Bus	16 %
Other	8 %
Bicycle	0 %
Public Bus	0 %

Commuting Patterns of Older-Aged Children (3rd – 5th Grade)

The surveys of parents of older-aged (3rd-5th grade) indicate that the car-to-school average for a typical week is 36% in the morning and increases to 40% in the afternoon. The school bus-to-school average for a typical week is 32% in both the morning and afternoon. The walk-to-school average for a typical week is 28% in the morning and decreases to 24% in the afternoon. None of the students ride a bicycle, public bus, or alternative commute mode in the morning or afternoon.

COMMUTING PATTERNS OF OLDER-AGED CHILDREN (3rd-5th)

Morning	**Average Overall**
Car	36 %
School Bus	32 %
Walk	28 %
Bicycle	0 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	40 %
School Bus	32 %
Walk	24 %
Bicycle	0 %
Public Bus	0 %
Other	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. The table below includes the top neighborhood safety concerns expressed by survey respondents.

SUMMARY OF TOP RANKING NEIGHBORHOOD SAFETY CONCERNS

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	14
Issues with Crime	12

Neighborhood Safety Concerns For Younger-Aged Children (K – 2nd Grade)

Neighborhood safety concerns for parents of younger-aged (K-2nd) children include three main concerns including issues with speeding vehicles, crime, and transportation outside of the school zone. There were approximately four comments of concern regarding speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Polk Drive and Texas Street. Additionally, there were three comments of concern regarding crime. One crime area of concern mentioned was near Holton Street. Lastly, there were approximately two comments of concern regarding issues with transportation outside of the school zone. In both instances, parents mentioned vehicles going around stopped buses as a problem, particularly on Polk Drive and Texas Street.

SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (K-2nd Grade)

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	4
Issues with Crime	3
Issues with Transportation Outside of School Zone	2

Neighborhood Safety Concerns For Older-Aged Children (3rd – 5th Grade)

Neighborhood safety concerns for parents of older-aged (3rd-5th) children also include issues with speeding vehicles, crime, and sidewalks/walking. There were approximately 10 comments of concern regarding speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are at the intersection of Orange Avenue & Pasco Street, as well as, Texas Street. Parents also mention vehicles speeding in school zones and neighborhoods. Additionally, there were nine comments of concern regarding crime. Specific issues with crime were the concern of high crime areas near Texas Street, loose animals, and the need to keep checking for sexual offenders/predators near the school. Lastly, there were approximately three comments of concern regarding issues with sidewalks/walking. General concerns include broken sidewalks, sidewalks that are too narrow, and the dangers of inclement weather when walking. A specific location where broken sidewalks are a problem is Saxon Street.

SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (3rd-5th Grade)

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	10
Issues with Crime	9
Issues with Sidewalks/Walking	3

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).The table below includes the top ranking responses to the influential factors question from the survey.

Summary of Influential Factors

Influential factors such as enforcing speed limits and having flashing lights in school zones, accompanying children (by themselves/other parents), and having a greater adult presence along routes to school were mutually agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th. However, parents of younger-aged children showed more concern with the availability of crossing guards while parents of older-aged children showed more concern with providing more walking and bicycling safety training for students.

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 Speed limits were strictly enforced in school speed zones		*2*	*0*	*0*	*3*	*28*	10
#2 Accompanied by myself or other parents		*0*	*0*	*2*	*5*	*27*	9
#2 School speed zones were marked with flashing signs		*1*	*0*	*0*	*4*	*27*	11
#2 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*1*	*0*	*1*	*4*	*27*	10

Influential Factors for Younger-Aged Children (K – 2nd Grade)

Parents of children in Kindergarten through 2nd grade agreed that the top five influential factors to allow their child to walk or bicycle to school more often included factors related to enforcing speed limits in school zones and marking them with flashing signs, accompanying children (by themselves/other parents), having a greater adult presence along routes to school, and the availability of crossing guards.

TOP RANKING INFLUENTIAL FACTORS FOR YOUNGER-AGED CHILDREN (K-2nd)

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 School speed zones were marked with flashing signs		*0*	*0*	*0*	*1*	*15*	4
#1 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*0*	*0*	*0*	*1*	*15*	4
#2 Accompanied by myself or other parents		*0*	*0*	*1*	*2*	*14*	3
#2 Additional crossing guards were provided at busy intersections		*0*	*0*	*0*	*1*	*14*	5
#2 Speed limits were strictly enforced in school speed zones		*0*	*0*	*0*	*1*	*14*	5

Influential Factors for Older-Aged Children (3rd – 5th Grade)

Parents of children in 3rd through 5th grade agreed that the top five influential factors to allow their child to walk or bicycle to school more often included factors related to enforcing speed limits in school zones and marking them with flashing signs, accompanying children (by themselves/other parents), having a greater adult presence along routes to school, and providing more walking and bicycling safety training for students.

TOP RANKING INFLUENTIAL FACTORS FOR OLDER-AGED CHILDREN (3rd-5th)

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 Speed limits were strictly enforced in school speed zones		*2*	*0*	*0*	*2*	*14*	5
#2 Accompanied by myself or other parents		*0*	*0*	*1*	*3*	*13*	6
#3 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*1*	*0*	*1*	*3*	*12*	6
#3 School speed zones were marked with flashing signs		*1*	*0*	*0*	*3*	*12*	7
#3 Schools provided more walking and bicycling safety training for students		*1*	*0*	*0*	*3*	*12*	7