Safe Routes to School Action Plan for Archdale, North Carolina

Archdale Elementary School
John Lawrence Elementary School
Trindale Elementary School
Archdale-Trinity Middle School

August, 2011

Funded by the North Carolina Department of Transportation

Prepared by

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ACKNOWLEDGEMENTS

This report represents the work of the Safe Routes to School Team in Archdale, North Carolina. In the fall of 2008, the North Carolina Department of Transportation (NCDOT) selected Archdale to receive planning assistance through the NC Safe Routes to School (SRTS) Program. As a component of this participation, the City received technical assistance in order to develop a SRTS Action Plan. The City's SRTS Team was organized and provided input, guidance, and oversight in the writing of the plan.

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The primary purposes of the Safe Routes to School Program are to:

- Enable and encourage children, including those with disabilities, to walk and bicycle to school.
- Make bicycling and walking to school a safer and more appealing transportation option, thereby encouraging a healthy and active lifestyle from an early age.
- Facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

PREFACE

What is Safe Routes to School?

A generation ago, approximately half of all school-aged children walked or bicycled to school. Today, less than 15% of children enjoy that trip[1]. There are a number of reasons for the decline in active travel to school, from land use policies and school consolidation, to fears about traffic safety and lack of infrastructure for non-motorized transportation. As a result, more parents are driving their children to school, morning traffic congestion is worsening, and children are engaging in less physical activity. Childhood obesity and diabetes rates are at all-time highs. Current statistics from the National Health and Nutrition Examination Survey report that one-fifth of all American adolescents aged 6 to 11 suffer from childhood obesity.[2] Committed citizens in North Carolina can change this cycle, just as those in other communities across the country have done.

Safe Routes to School (SRTS) is based on a safety initiative that originated in Odense, Denmark in the 1970s. The community was experiencing a high rate of crashes, including fatalities, involving children on their way to and from school. To resolve the problem, the town brought together a diverse group of citizens, transportation professionals, and local government representatives who developed and implemented a variety of infrastructure improvements and educational and awareness programs. They achieved dramatic results, with 29% fewer crashes involving students and a 58% reduction in the overall number of crashes involving pedestrians and cyclists.[3] The Bronx is credited with the first SRTS program in the United States. Successful federal pilot programs in California and Florida demonstrated how educational and encouragement programs could help get more children safely walking and biking to school. These successful pilot programs combined with strong demand prompted Congress to establish a national SRTS program in 2005.

The Federal SRTS Program

The Federal SRTS Program was established in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). It is a federally-funded reimbursement program providing communities with the opportunity to improve conditions for bicycling and walking to school. Section 1404 of SAFETEA-LU mandates that the NCDOT administers this program within the state and provides financial assistance to state, local and regional agencies and non-profit organizations that demonstrate an ability to meet the requirements of the program. The program provides funds for infrastructure improvements and non-infrastructure educational and encouragement activities for schools serving grades K to 8.

[1] Safe Routes to School National Partnership, February 2010.

[2] Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008, June 2010.

[3] Troels, A. Safe routes give healthy cycling children. Available at: www.cykelby.dk/eng_safe%20routes.asp. Accessed: January 19, 2006.

Infrastructure improvements must occur within a two mile radius of the school. This distance is considered reasonable for a child to bicycle to and from school each day.

Why SRTS Matters

Nationally, only 13% of children ages 5 to 14 walk or bike to school. Nearly half of the children in this age range are driven to school by their parents. This contrasts sharply with the statistical picture of 40 years ago. In 1969, 48% of children ages 5 to 14 walked or biked to school and almost 90% of kids living within one mile of school walked or biked. Now, less than 40% of school children living within a mile of school walk or bike. [4]

This decline in active travel to school coincides with a significant increase in U.S. childhood obesity rates, which rose from 4%-5%of children ages 6 to 19 in 1963-1965 to 18%-20% in 2007-2008.[5] The negative health consequences of obesity include premature death and chronic diseases, such as diabetes, heart disease, high blood pressure, asthma and various cancer types. Other impacts include increased health care costs, lost productivity and social stigmatization.[6]

The decline in active travel to school also has a direct impact on traffic congestion near schools. Studies show that school-related traffic accounts for 20 to 25% of all morning peak hour traffic.[7] By reducing the number of parents driving children to school, we can relieve morning peak hour delays and congestion.

Research has shown that the most successful way to increase bicycling and walking is through a comprehensive approach that includes the "Five Es": education, encouragement, engineering, enforcement, and evaluation. Local SRTS programs should follow this comprehensive strategy, focusing on infrastructure improvements where the physical environment is not conducive to walking or bicycling, and promoting non-infrastructure programs, including education, encouragement and enforcement strategies. More information on the Five Es is provided on page 5. In addition, examination of policies and adjustments to those policies are critical components of this SRTS Action Plan. A summary of "best practices" are included in **Section 3.6** that focus on city policies, school district policies, and individual school policies that would support the SRTS program and play a key role in the SRTS program's success.

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[4] Data from the 2009 U.S. Department of Transportation National Household Travel Survey (NHTS). National Center for Safe Routes to School & Safe Routes to School National Partnership. (2010, April 8). U.S. Travel Data Show Decline In Walking And Bicycling To School Has Stabilized: Safe Routes to School Programs Encourage Active, Safe Trips to School. Chapel Hill, NC & Boulder, CO. Available at: http://www.saferoutesinfo.org/news_room/2010-04-08_2010_nhts_release.cfm. Accessed on October 14, 2010.

[5] Ogden, C and Carroll, M. Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008. National Center for Health Statistics (NCHS) Health E-Stat. Available at: http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.pdf.

[6] U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. Rockville, MD: Office of the Surgeon General, 2001. Available at: http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf

[7] Parisi Associates. Transportation Tools to Improve Children's Health and Mobility, 2003. Available at: http://www.lgc.org/freepub/PDF/Land_Use/fact_sheets/sr2s_transportation_tools.pdf and

Morris, J, Wang, F, & Lilja. School Children's Travel Patterns: A Look Back and a Way Forward. Transport Engineering in Australia, Vol. 7, No. 1/2, 2001: 15-25. Available at: http://www.patrec.org/web_docs/atrf/papers/2001/1405_Morris,%20Wang%20&%20Lilja%20%282001%29.pdf.

The North Carolina SRTS Program

The NCDOT Division of Bicycle and Pedestrian Transportation has a long history of promoting active travel to and around schools. The Division continues to work with communities across the state to develop pedestrian and bicycle plans; often the first step in improving non-motorized transportation infrastructure within a municipality. The Division gives design support to other NCDOT units and provides a number of other services to municipalities and organizations throughout the state. These services include safety education, bicycle safety skills training, crossing guard training, and helmet promotions.

NCDOT first identified safe travel to school as a safety priority in 2000. In 2005, it established the North Carolina SRTS Program to coordinate with the federal program. It works with schools, local governments and agencies, advocacy groups, non-profit organizations, and public health professionals at a grassroots level to identify improvements that can help make bicycling and walking to and from school a safe and healthy transportation alternative.

Any school or community in North Carolina can develop a SRTS program. All that is needed is a dedicated group of parents, school administrators, local government officials, and other community members who want to improve walking and bicycling conditions around their school(s). A SRTS program can be implemented without federal funding. Sometimes, very little infrastructure improvement is required; all that is really needed is some education and encouragement to change a community's habit of driving children to school. **Parents are often persuaded by the actions of others. If other children in their neighborhood are walking or biking, they are more likely to let their children do so as well.**

A SRTS Action Plan is a document prepared by a group of committed citizens, parents, school administrators, and local government officials that starts with a goal or vision of enhancing opportunities for active travel to school, and then outlines ways to turn those opportunities into realities. It is the best first step in a successful SRTS program. A SRTS Action Plan can address a single school, a cluster of schools, or several schools with a community or school district. It is an excellent tool for engaging schools and preparing them to make significant changes in their travel environments.

The Five Es of SRTS

Engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding schools. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.

Education programs target children, parents, caregivers and neighbors, teaching how to walk and bicycle safely and informing drivers on how to drive more safely around pedestrians and bicyclists. Education programs can also incorporate health and environment messages.

Encouragement activities promote walking and bicycling to school to children, parents and community members. Events such as Walk to School Day, contests such as a Frequent Walker/Bicyclist challenge, or on-going programs such as a Walking School Bus or Bicycle Train can promote and encourage walking and bicycling as a popular way to get to school.

Enforcement strategies increase the safety of children bicycling and walking to school by helping to change unsafe behaviors of drivers, as well as pedestrians and bicyclists. A community approach to enforcement involves students, parents or caregivers, school personnel, crossing guards and law enforcement officers.

Evaluation is an important component of SRTS programs that can be incorporated into each of the other E's. Collecting information before and after program activities or projects are implemented allow communities to track progress and outcomes, and provide information to guide program development.

An excerpt from: "Safe Routes to School: A Transportation Legacy", the report of the National Safe Routes to School Task Force

CHAPTER 1: INTRODUCTION

Archdale joins communities in North Carolina and across the country that have developed local SRTS programs that combine engineering, education, encouragement, enforcement, and evaluation strategies to improve the safety and health of students who walk and bicycle to school. [8] These strategies are often referred to as the "Five Es of SRTS." (See inset on page 4.)

This Action Plan outlines the City of Archdale's intentions for making walking and bicycling to and from school more sustainable and safer for students and the community. The plan is guided by the following visions for the community.

Archdale is:

- A place where it is safe for children to walk and bicycle to school.
- A small town with interconnected streets used by pedestrians and bicyclists.
- Committed to protecting the natural environment.
- A place that encourages physical activity.

1.1 Schools

The SRTS Action Plan addresses four schools located in Archdale: Archdale Elementary, John Lawrence Elementary, Trindale Elementary and Archdale-Trinity Middle. These schools are part of the Randolph County School District and geographically proximal to Archdale's neighborhoods. Additionally, students at the three elementary schools transition to Archdale-Trinity Middle School for grades 7 and 8[9]. The Archdale SRTS Action Plan makes it easier for the schools to collaborate on SRTS projects and activities, and for SRTS-related messages introduced in the earlier grades to be reinforced as students move through these four Archdale schools. Basic information on the four schools, including grades served and number of students, is provided in **Table 1**. A map showing school locations relative to one another is provided as **Figure 1**.

Table 1: Grades and Number of Students by School[10]

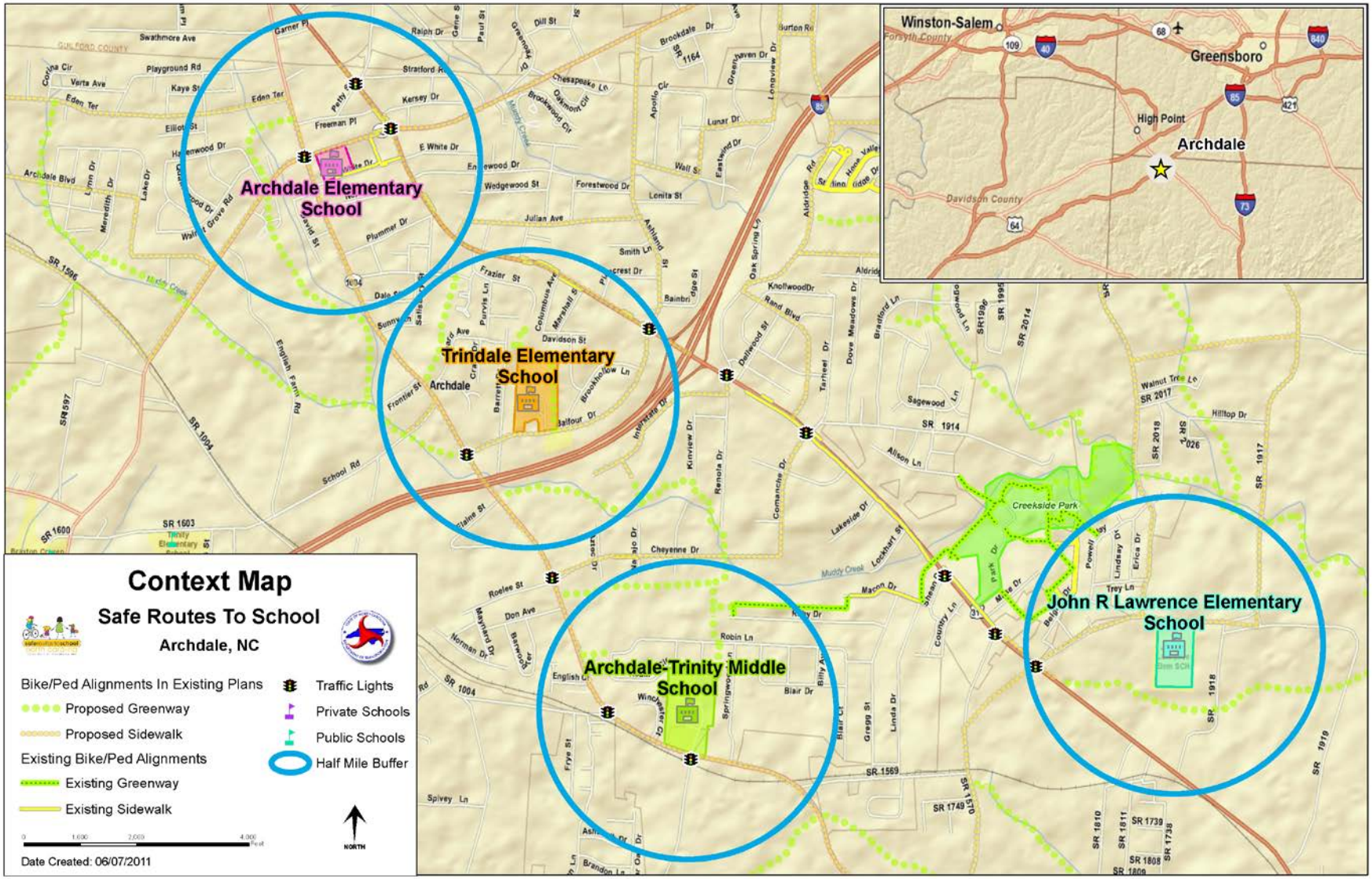
School	Grades	# of students
Archdale Elementary School	K to 5	414
John Lawrence Elementary School	K to 5	531
Trindale Elementary School	Pre K to 5	363
Archdale-Trinity Middle School	7 and 8	776

[8] When the word "Archdale" is used alone in this plan it refers to Archdale the physical community of Archdale the community of people. When the term "City of Archdale" is used it refers to the government of Archdale.

[9] Students attend Braxten Craven Middle School, located in Trinity, North Carolina for sixth grade. Braxten Craven Middle School is not included in the grant award for this SRTS Action Plan.

[10] Data provided by Randolph County School district for the 2009-2010 school year. Distances were calculated aerially from the school site.

Figure 1: Archdale Schools Context Map



1.2 Plan Development and Schedule

The Archdale SRTS Action Plan was developed over the course of three meetings from November 2009 to December 2010. **Table 2** summarizes specific meeting content and outcomes. The Archdale SRTS Team and other community members who participated identified and responded to recommendations for each of the Five Es. The formal plan development process was preceded by a workshop held in February 2008, at which members of the Archdale SRTS Team and community members discussed their vision for the SRTS program and began developing engineering, encouragement, education, and enforcement strategies for the four Archdale schools.

Table 2: Plan Development Meeting Dates, Content, and Outcomes

Meeting Dates	Content and Outcomes
February 2008	• Established vision for the SRTS program in Archdale. • Began developing engineering, encouragement, education, and enforcement strategies for each school.
November 2009	• Reviewed goals and structure of federal and state SRTS programs. • Reviewed the Five Es of SRTS. • Summarized SRTS-related efforts in the City of Archdale, including Bush Hill Bike Rodeos, and recent City Council resolutions passed in support of Safe Routes to School. • Identified existing walking routes and barriers to walking and bicycling.
March 2010	• Obtained feedback on engineering recommendations. • Established timeframes and lead coordinators for education, encouragement, enforcement, and evaluation activities.
December 2010	• Reviewed and commented on draft Archdale SRTS Action Plan. • Discussed sustaining the SRTS program.

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CHAPTER 2: EXISTING CONDITIONS AND BARRIERS

2.1 Location and Context

Archdale is located approximately three miles southeast of High Point and approximately 15 miles southwest of Greensboro. The city boundaries include portions of Guilford and Randolph counties. The City originated from the town of Bush Hill, a predominantly Quaker settlement founded in 1786. Residents later changed the name of the town to Archdale to honor Quaker Governor, John Archdale. The town began as a rural farming community and is now more of a suburban community.

Figure 2: Downtown Archdale

In the 1850s, farming gave way to industry and local retail establishments. Grocery stores and schools were built to support growing neighborhoods. In 1969 the thriving community incorporated. Proud of its Quaker beginnings, Archdale celebrated its bicentennial by hosting the first annual Bush Hill Festival in 1986.

Archdale continues to grow and modernize but, it still maintains that small-town feel. Several civic properties are located within walking distance of neighborhoods, such as Creekside Park, the Archdale Public Library and the Archdale campus of the Randolph Community College. Archdale looks to the future for its neighborhoods, schools, and businesses by planning for walkable districts in the Archdale Pedestrian Network Plan, adopted in 2009.

2.2 Policies Impacting Student Travel

2.2.01 Archdale 20/20 Strategic Plan: Focusing on the Future

Recognizing the recent growth of the city's neighborhoods and business districts, Archdale's City Council began planning strategically for its future development in 2003, adopting a strategic plan in September, 2004. The Plan makes it clear that Archdale is committed to improving walkability with a goal to: "Expand/enhance the connectivity of Archdale's greenway system to [The Town of]Trinity's greenway system, tying together civic spaces and new developments, and utilizing water and sewer lines when feasible." [11]

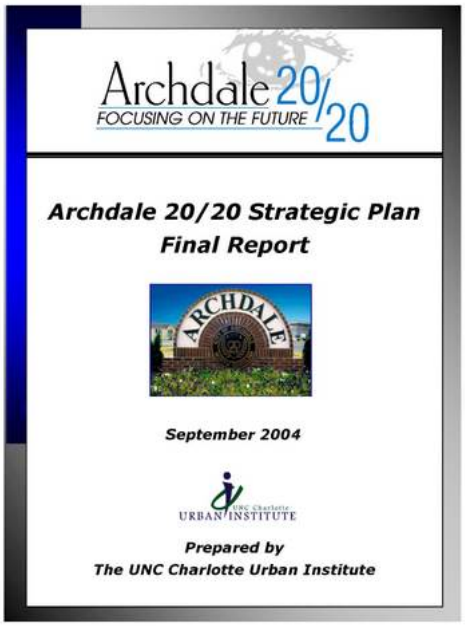

Figure 3: Cover of Archdale's 20/20 Strategic Plan

[11] Archdale 20/20 Strategic Plan. Goal 5, Sub Goal E (2004).

Through a public engagement process, citizens responded to questions about desired changes and what should be preserved. The top "neighborhood problem" cited in the survey among respondents was lack of sidewalks (62%).[12] The Archdale 20/20 Strategic Plan has created momentum for improving the sidewalk and greenways network. The Strategic Plan was utilized to support the 2009 amendment of the Archdale Future Land Use Plan to include a Pedestrian Network Plan.

2.2.02 Zoning Ordinance

The City of Archdale adopted a zoning ordinance in 1969 to sustain responsible planning. The zoning ordinance requires sidewalks and greenways for all streets connecting schools, recreational areas and residences.[13] These areas are identified on the map of proposed Sidewalks and Greenways included in the Pedestrian Network Plan. Design standards for the sidewalks and greenways are included in Sections 1-6 and 1-7 of the City of Archdale Subdivision Ordinance, as well as the City of Archdale Construction and Development Guidelines.

2.2.03 Subdivision Regulations

Procedures for subdividing land are in the city's subdivision ordinance, adopted in 2002. Section 1-7, Lot Design Standards, lists requirements for sidewalks and greenways in new developments. All new developments must install planned sidewalks and greenways as designated in the Pedestrian Network Plan and sidewalks are also required in all business districts. The City of Archdale is responsible for installing sidewalks and greenways in existing developments. Developers can choose to pay a fee *in lieu* of constructing sidewalks. Funding generated from the fees goes directly into the City's Pedestrian Improvement Fund, which is used for funding high priority sidewalk projects.

For residential collector-type streets having a minimum width of 28 feet from face-of-curb to face-of-curb, sidewalks shall be required on both sides of the street. For local streets having a minimum width of less than 28 feet from face-of-curb to face-of-curb, sidewalks are required on only one side of the street. All sidewalks shall be a minimum of 5 feet wide and shall be constructed as specified in the Construction and Development Guidelines. Buffers are not required for new sidewalks.

The Archdale Pedestrian Network Plan provides standards for greenways in industrial properties and access to greenways from these properties. For example, greenways and connectors shall be paved at a minimum of 8 feet wide and 4 feet wide, respectively.

2.2.04 Archdale City Council Resolution April 2010

In April 2010 The Mayor and Council adopted a resolution to support efforts to improve walking and bicycling to school using any funds available. The Resolution addresses the Five Es – Education, Encouragement, Enforcement, Engineering, and Evaluation. The Resolution also specifically acknowledges the need and intent to construct sidewalks on Balfour Road and Trindale School Drive to connect neighborhoods to their local schools.

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[12] Archdale 20/20 Plan, page 54.

[13] Article III: Application; General Provisions; Exceptions and Modifications, Section 3.22.

2.2.05 Archdale City Council Resolution November 2007

Based on a recommendation from the ArchdaleTransportation Advisory Commission, The Mayor and Council adopted a resolution to formally announce its full support of the SRTS program, in November, 2007. This resolution shows the public's backing of the comprehensive SRTS program. The resolution recognizes benefits of the SRTS program to both the students and the community.

2.2.06 Transportation Advisory Resolution January 2007

In January 2007 the Transportation Advisory Committee of the High Point Metropolitan Planning Organization (HPMPO) adopted a resolution that unequivocally supports the Safe Routes to School program in Archdale. The specific language states, "Now therefore, be it resolved that the High Point Transportation Advisory Committee supports and encourages the cities of Archdale, High Point, and Jamestown, and the school systems of Guilford County and Randolph County to participate in Safe Routes to School initiatives. This shows that the Advisory Committee supports and encourages not only the City of Archdale, but also the surrounding communities, including Archdale and Randolph County to participate in Safe Routes to School initiatives. The resolution highlights the benefits of the Safe Routes to School program. Specifically it recognizes that walking and biking to school increases opportunities for physical activity, can reduce traffic congestion and air pollution around schools, and makes walkways and bikeways safer for the entire community. Furthermore, improving the walking and biking routes to schools benefits all stakeholders: children, parents, and neighbors.

2.2.07 Street, Sidewalk and Greenway Maintenance

Residents and businesses must ensure that the sidewalks and greenways adjoining their property are free of obstacles and debris. The City of Archdale is responsible for maintaining all sidewalks and greenways.

2.2.08 Busing Policy

Randolph County School District provides busing to all students attending public schools in Archdale. The school district's transportation department determines bus stops and routes. If students use other means to get to school such as walking, bicycling, or family vehicles, that decision is made by the parents.

2.2.09 Crossing Guard Policy

None of Archdale's local agencies or boards has a crossing guard policy. Some police officers volunteer to direct traffic and help students cross the street on an informal and unscheduled basis.

2.2.10 School Wellness Policies

Randolph County Schools has a Wellness Policy that focuses on providing opportunities for healthy nutrition and physical activity[14]. While the policy does not specifically mention pedestrian and bicycle

[14] Randolph County's School Wellness Policy; March 20, 2006. Available at: http://nt5.scbbs.com/cgi-bin/om_isapi.dll?clientID=257492495&infobase=randolph.nfo&jump=6140&softpage=PL_frame#JUMPDEST_6140

education, or the health benefits of walking and bicycling, promoting SRTS goals would complement the existing wellness policy.

2.3 Support for Walking and Bicycling to School

2.3.01 Planning

In addition to the grant the City of Archdale received from NCDOT to produce this plan, the City of Archdale completed several planning efforts to improve conditions for pedestrians and bicyclists.

Archdale Future Land Use Plan (2009)

The Future Land Use Plan was adopted in response to the rapid development that the City experienced in the 1990's. Archdale's identity as a bedroom community for Greensboro and High Point was evolving during that time into a more vibrant and sustainable town. During the development of the plan, it became clear that the City needed to improve its disconnected sidewalk network and build upon its trails and greenways in order to expand the recreational opportunities provided by its parks. Support for these improvements inspired the Pedestrian Network Plan that was eventually adopted as an additional chapter of the Future Land Use Plan.

Archdale Pedestrian Network Plan (2009)

The City's Pedestrian Network Plan, a section of the Archdale Future Land Use Plan (2009), includes recommendations for improving pedestrian connectivity, reducing automobile dependence, and extending the historic downtown's pedestrian friendly features to other parts of the city. The plan calls for the addition of 26 miles of sidewalk and 13.5 miles of greenways to the existing network. Sidewalks and greenways are designed to be interconnected to allow citizens the opportunity to walk continuously from one side of the city to the other. Most sidewalks recommended in the plan create walkability along major thoroughfares and major city streets. Greenway trails predominately follow areas located in the floodplain. Proposed facilities in the Pedestrian Network Plan, in the vicinity of the four schools, are shown in **Figure 1**.

High Point Metropolitan Planning Organization 2035 Long Range Transportation Plan

The High Point Metropolitan Planning Organization (HPMPO) is a regional agency tasked with planning and developing adequate transportation systems for the municipalities of High Point, Archdale, Jamestown, Thomasville, Trinity, and Wallburg and portions of Forsyth, Guilford, Randolph and Davidson counties. In 2009, the HPMPO completed the final draft of the High Point 2035 Multi-Modal Long Range Transportation Plan (LRTP). Support for the development and implementation of pedestrian and bicycle infrastructure are included in the plan's goals and objectives, and detailed in Section 4.3 *Bicycle and Pedestrian Element.* The goals recognize schools as destinations that should be connected and accessible by sidewalks and greenways. In Section 4.3, Archdale is specifically mentioned as an area that is actively developing of sidewalks and greenways network. All sidewalk and greenway projects identified in Archdale's Pedestrian Network Plan are included on the map in the 2035 LRTP.

Safe Routes to School Action Plan – Complementary Actions

The SRTS-supportive recommendations contained in Chapters 3 and 4 of this Plan that complement previous planning efforts are listed in **Table 3** below. The table lists the schools impacted and when a recommendation from the SRTS Action Plan is part of a either the Archdale 20/20 Strategic Plan or the Archdale Pedestrian Network Plan:

Table 3: SRTS Action Plan Recommendations that Support Previous Planning Efforts

Recommendation from SRTS Action Plan	Supported Planning Effort	Schools Impacted
All roads connecting residences, schools and recreational areas to be connected by a network of sidewalks and greenways	Archdale 20/20 Strategic Plan	All
Construct sidewalk on Balfour Drive between Archdale Road and S. Main Street	Pedestrian Network Plan	Trindale Elementary School
Construct a greenway connecting the school property to neighborhood park, accessible by Davidson Street	Pedestrian Network Plan	Trindale Elementary School
Construct sidewalk on Suits Road between S. Main Street and Trotter County Road	Pedestrian Network Plan	John Lawrence Elementary School
Construct sidewalk on Weant Road between Suits Road and Trey Lane	Pedestrian Network Plan	John Lawrence Elementary School
Construct sidewalk on Trindale Road from N Main Street to the proposed Greenway (past Archdale Road)	Pedestrian Network Plan	Archdale Elementary School
Construct sidewalk on Archdale Road between Trindale Road and W White Drive.	Pedestrian Network Plan	Archdale Elementary School
Construct proposed greenway that will connect the school property to the neighborhoods north and west of the school.	Pedestrian Network Plan	Archdale-Trinity Middle School
Construct proposed greenway connection to existing greenway, located southwest of the school property. The existing greenway connects Roby Drive to Creekside Park.	Pedestrian Network Plan	Archdale-Trinity Middle School
Install sidewalk conforming to ADA standards on Archdale Road from Trinity Road to to Lane Drive, and on Lane Drive between Archdale Road and Linda Drive.	Pedestrian Network Plan	Archdale-Trinity Middle School

2.3.02 Education

Safe Kids Coalition of Randolph County

The Safe Kids Coalition is a nationwide network of organizations working to prevent unintentional childhood injury through education and outreach. The coalition's goals overlap the SRTS, which aims to teach students the skills that they need to walk and bike to schol safely. Randolph County's Safe Kids Coalition Chapter organizes several annual events and workshops to teach students safety skills, while making the lessons fun and entertaining. Many of these events integrate well with traditional SRTS events. For example, the SRTS program encourages students to participate in International Walk to School Month in October. Randolph County's Safe Kids Coalition hosts safe halloween events and assemblies that cover pedestrian

Figure 4: The Safe Kids Coalition of Randolph County conducts a bike rodeos for students at their school

safety skills and personal safety tips. Archdale schools have not particiapted in these events to date, but plan to work with the coalition's coordinator to take full advantage of the events and programs in the coming academic year (see **Table 8**: Archdale Education Strategies on page 27).

2.3.03 Encouragement

Bush Hill Festival Bike Rodeo

The Archdale-Trinity Chamber of Congress organizes and runs the annual Bush Hill Festival in early September. The festival, which began in 1986 as a celebration of the community's origin as a Quaker Settlement, has grown into a two-day event that promotes local businesses, public health and safety skills, as well as family-friendly entertainment.

The festival featured a family bike rodeo. Children ages 7 to 12 learned bicycle safety skills, parents learned how to properly fit a helmet on their children, and families learned how to ride safely around town. Encouraged to bring their bikes and helmets, children practiced their new safe riding skills at the festival. The rodeo was well-timed with the start of the new school year.

Figure 5: Students learn about public safety at the Bush Hill Festival (2010)

2.3.04 Enforcement

Police Officers

The City of Archdale Police Department provides support for two of the four schools included in this plan. Police officers are stationed at Trindale Elementary School during arrival and dismissal to help ensure safe and lawful travel behavior by drivers, pedestrians, and bicyclists. Archdale-Trinity Middle School's School Resource Officer (SRO) is on the campus during the school day, as well as arrival and dismissal times. Along with other duties, the SRO at Archdale-Trinity Middle assists with drop-off and pick-up procedure enforcement. There are no police officers stationed at Archdale Elementary or John Lawrence Elementary. Archdale City Police will assign police officer crossing guards to these schools if requests are made and resources are available. Archdale City Police can incorporate the school zone as part of their rounds for speed enforcement upon request.

2.4 Perceived Barriers Affecting Parental Decisions

All four schools used survey forms provided by the National Center for Safe Routes to School to establish baseline information on student travel behavior and the perceived barriers to walking and bicycling that currently exist at each the respective school. These surveys can later be used as a benchmark to evaluate the implementation of SRTS recommendations.

The National Center makes two surveys available; the Parent Survey Form and Student Travel Talley Form. The Parent Survey form is a two-page questionnaire intended to collect information from parents of K-8th graders about how their children travel to and from school, what barriers keep them from allowing their children to walk or bike to and from school, and their attitudes about walking and biking to school. The Student Travel Talley Form is a one-page sheet used to count the number of students arriving to and departing from school by various travel modes (walk, bicycle, bus, car etc).

All four schools administered both the Parent Survey and Student Talley Form in either the winter or the spring of 2010. Results from the Parent Survey are included in this section. In addition, a summary of key results from the Parent Surveys for the schools is included in Appendix A: School Profiles. Results from the Student Tallies are included in Section 2.5, Student Walking and Bicycling Patterns.

A key question on the Parent Survey Form asks parents who do not currently allow their children to walk or bicycle to school about the types of improvements that might cause them to change their minds. The results of this question are presented in **Table 4**.

Table 4: Affect on Parental Decisions Not to Allow Student Walking and Bicycling if Certain Problems Were Improved[15]

Problem	Archdale Elementary School		John Lawrence Elementary School[16]	Trindale Elementary School		Archdale-Trinity Middle School	
	Would affect	May affect	Would affect	Would affect	May affect	Would affect	May affect
Distance	25%	10%	72%	7%	12%	27%	10%
Sidewalks/ or pathways	23%	9%	47%	11%	8%	18%	10%
Traffic speed along route	26%	9%	81%	6%	13%	16%	10%
Traffic volume along route	26%	9%	80%	7%	10%	15%	7%
Weather or climate	21%	8%	47%	5%	8%	23%	7%
Violence or Crime	20%	8%	65%	5%	11%	18%	7%
Safety of intersections & crossings	26%	10%	59%	8%	7%	9%	3%
Time	10%	8%	3%	3%	7%	14%	8%
Crossing Guards	19%	7%	21%	5%	4%	12%	3%
Adults to walk/ bike with	19%	5%	26%	6%	4%	8%	8%
Convenience of driving	12%	8%	20%	2%	4%	9%	0%

[15] The full text of the question posed to parents in the Parent Survey is **"**Would you probably let your child walk or bike to/from school if this problem were changed or improved?**"**

[16] The current version of the question only asks respondents to mark which improvements "would affect" their decision to allow their child to walk or bike to school.

Problem	Archdale Elementary School		John Lawrence Elementary School[16]	Trindale Elementary School		Archdale-Trinity Middle School	
	Would affect	May affect	Would affect	Would affect	May affect	Would affect	May affect
Before/ after-school activities	8%	6%	16%	0%	4%	8%	4%

The results suggest that the following improvements are likely to produce the greatest impact on the percentage of children who walk and bicycle to school:

- **Decrease the distances children must walk and bicycle to school.** The number of children who walk to school in Archdale drops precipitously with distance from school. This means that relatively small reductions in walking and bicycling distance might yield significant increases in the proportion of children that walk and bicycle to school. A number of techniques, like park- and-walk or bus-and-walk programs, can accomplish this without requiring families to relocate.
- **Increase number of sidewalks and greenways that connect neighborhoods and schools.** Schools in Archdale are often surrounded by single-family detached homes. While many of the schools are located within walking distance of students' homes, sidewalk connectivity between the two points is lacking. Many of the sidewalks and greenways planned in Archdale's Pedestrian Network Plan connect neighborhoods to schools. Sidewalk and trail projects have clear political support and need funding to be implemented.
- **Reduce traffic speed along routes to school.** Traffic speeds along routes to school are a major concern in Archdale. The odds of a pedestrian killed in a collision with a motor vehicle increase dramatically with vehicular speeds. [17]
- **Reduce traffic volumes along school routes.** Traffic volumes around schools are heavily impacted by parents dropping children off and picking them up. In Archdale, traffic related to arrival and dismissal also increases volumes on downtown streets. Increasing the number of children walking and biking to school by implementing the recommendations in this plan will help reduce traffic volumes near schools and downtown.

Figure 6: Students walking to school in North Carolina

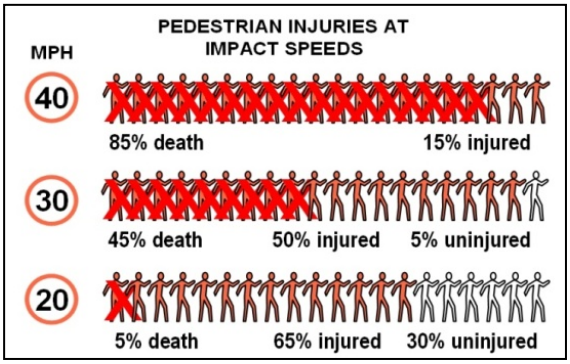


Figure 7: The probability that a pedestrian will be killed in a collision with a motor vehicle is approximately 14 times higher at 40 mph than at 20 mph.

[17] *Killing Speed and Saving Lives*, UK Department of Transportation, London, 1987.

- **Increase safety at intersections and crossings.** Pedestrians are most vulnerable when crossing at intersections. Child pedestrians are at greater risk due in part to their size. Children are shorter and thus not as easily seen as adults. Ensuring pedestrian safety at these locations is critical.

2.5 Student Walking and Bicycling Patterns

This section provides a summary of student walking and bicycling patterns at the four schools included in this plan. For additional detail, including a statistical overview, schedules, arrival/dismissal procedures, and field observations for each school see Appendix A: School Profiles.

2.5.01 Student Travel Modes

Table 5, which provides data from Student Tallies taken in the winter and spring of 2010, suggests most Archdale students travel to and from school in private vehicles, with a significant percentage traveling by bus. Few students indicated that they walked to school on the day that the tallies were taken. No students traveled to school by bike at the time the tallies were taken.

Table 5: Percentage of Students by Mode to School

School	% Students walking	% Students bicycling	% Students by bus	% Students by private vehicle	% Students by carpool
Archdale Elementary	0.5%	0%	30%	67%	2%
John Lawrence Elementary	0%	0%	28%	67%	5%
Trindale Elementary	0%	0%	23%	68%	7%
Archdale-Trinity Middle	0.2%	0%	41%	49%	8%

Table 6 provides enrollment data for the 2009-2010 academic school year. These numbers suggest that more students may walk or bike to school if conditions are improved.

Table 6: Student enrollment and the number of students living within 1 mile of school

School	Total Enrollment[18]	Students living within 1 mile of school	% of Students living within 1 mile of school
Archdale Elementary	414	242	59%
John Lawrence Elementary	531	126	24%
Trindale Elementary	363	89	25%
Archdale-Trinity Middle	776	70	9%

The availability of parental supervision may influence the walking and bicycling rates of younger children more strongly than for older children. When asked at what grade they would allow their child to walk or bicycle without parental supervision, 81% of parents responding to the Parent Survey said they would "not feel comfortable at any grade."[19] Of those parents who said they would allow their child to walk or bicycle to school without parental supervision at some point from grades K-8, all respondents chose a grade between 5 and 8 as the earliest grade. The results suggest two things. First, there may be a heightened need for pedestrian and bicycle safety education during grades 5-8. Second, ensuring parental supervision along student walking or bicycling routes is important. Therefore, implementing strategies designed to provide this supervision, such as walking school buses and bicycle trains, might be an effective way to increase walking and bicycling rates.

2.5.02 Student Walking and Bicycling Routes

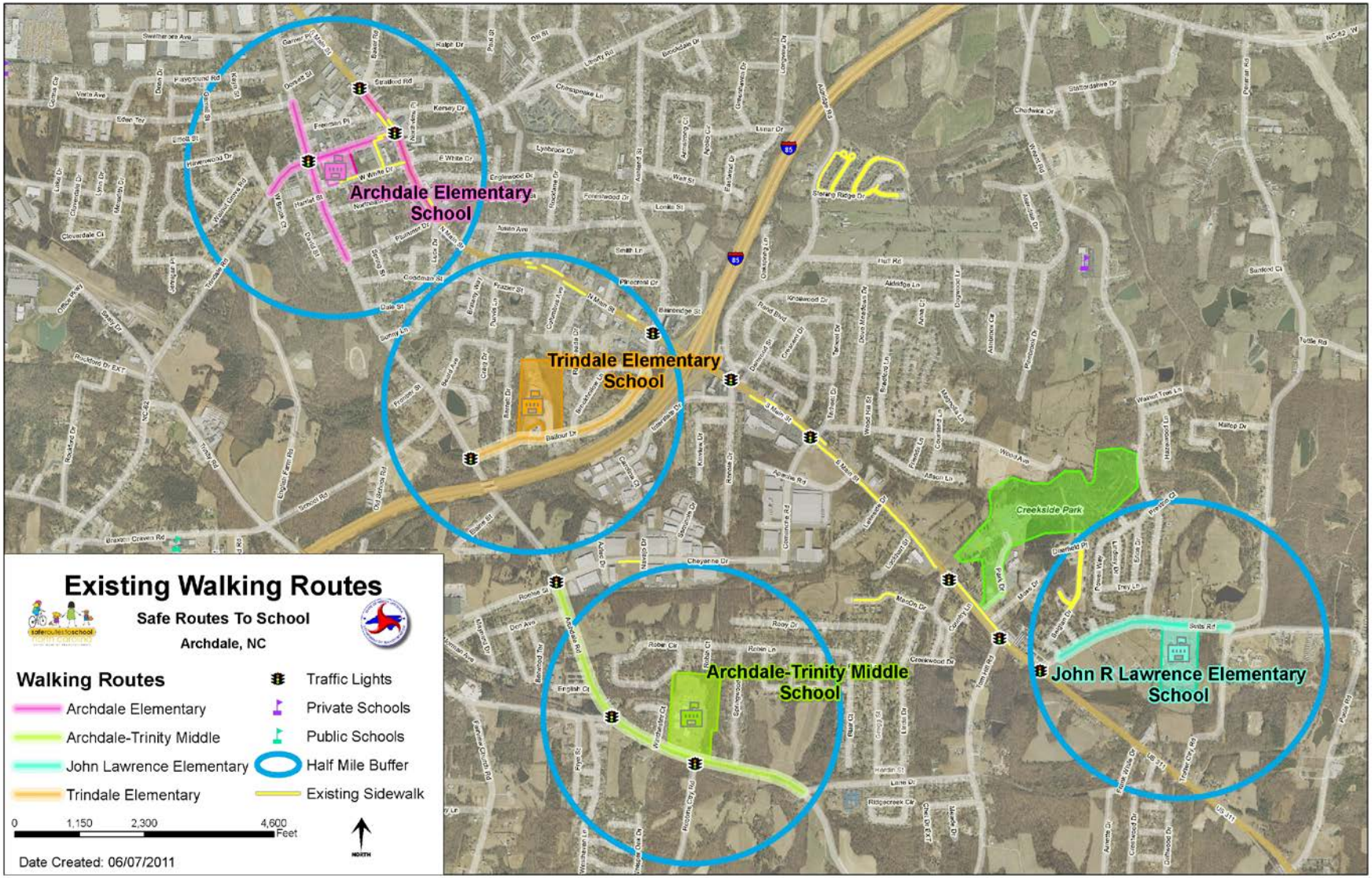
Student travel patterns were documented with field observations and conversations during team meetings. Key student walking routes for students at Archdale Elementary School, John Lawrence Elementary School, Trindale Elementary and Archdale-Trinity Middle School, shown in **Figure 8** include:

- **Main Street.** This is a key walking route at Archdale Elementary School.
- **Trindale Road.** Archdale Elementary School fronts on this road and students walking use this street to access the school.
- **Suits Road.** This route connects several neighborhoods that feed into John Lawrence Elementary School. Both school entrances front this road.
- **Balfour Drive.** This route connects several neighborhoods that feed into Trindale Elementary School. Both school entrances front this road.
- **Archdale Road.** This road connects neighborhoods that feed Trindale Elementary School and Archdale-Trinity Middle School. This road also links to several segments of the pedestrian network proposed in the Archdale Pedestrian Network Plan.

[18]Data provided by Randolph County School district for the 2009-2010 school year. Distances were calculated aerially from the school site.

[19] This calculation does not include data from John Lawrence Elementary School because this question was removed from the most updated version of the survey.

Figure 8: Existing Walking Routes in Archdale



2.6 Physical Conditions and Barriers

All of the schools are located within low-density neighborhoods. As such, the environment is conducive for walking and bicycling safely. Out of the four schools included in this plan, only one has sidewalks directly in front of the school, though all four schools have sidewalks on their properties.

All of the schools are sited on neighborhood collector streets, though many of the surrounding streets are cul-de-sacs that funnel all outgoing traffic to the same road. This causes congestion especially in the morning hours when families are dropping off students on the way to work. This congestion makes walking and bicycling unpleasant for parents and their children. There is potential to connect the cul-de-sacs with walking and bicycling paths to provide relief for non-motorized travel.

There are four- to five-foot wide buffered sidewalks on at least one side of some arterials and collectors in Archdale, but many low volume neighborhood streets in older neighborhoods lack sidewalks. Nearly all residential developments built since the City adopted its Subdivision Ordinance in 2002 have sidewalks without buffers built to comply with the code, which requires five-foot wide sidewalks on one side of the street.

There are few crosswalks at intersections in the City, and most signalized intersections lack pedestrian signal heads, even when sidewalks are present. None of the pedestrian signal heads have countdowns, which are considered a best practice for pedestrian crossing safety. Archdale also lacks designated bicycling infrastructure, and there are few bicycle parking locations throughout the town. None of the schools have bicycle parking on their properties.

The most complete and accessible network of sidewalks and pedestrian crossings is around Archdale Elementary School, the school closest to downtown. Sidewalks are lacking along walking routes for Trindale Elementary, John Lawrence Elementary and Archdale-Trinity Middle. Additional detail on existing conditions at each of the schools is provided in the Engineering Detail section that begins on page 38. An existing conditions map, including traffic counts, pedestrian crash data, and other existing conditions data for the City of Archdale is provided on the CD in the side pocket of this plan.

Figure 6: The Team met in November 2009 to discuss barriers and opportunities for SRTS in Archdale

2.7 Information Gathered from Team Meetings

Key issues were identified during the three meetings held by the Archdale SRTS Team during the planning process for this plan. Meeting minutes are included in **Appendix B**. Key issues include:

- Neighborhoods surrounding the schools lack sidewalks, and other safe pathways for students to use to walk or bike to school.
- Recreational walking and bicycling is valued in Archdale, but it lacks a connected network that supports this type of transportation, especially to civic locations such as schools, libraries and parks.
- High traffic speeds are one reason why parents are reluctant to allow their children to walk or bike to school.

- Traffic congestion around all four schools is problematic during morning drop-off and afternoon pick-up times.
- There are many groups with which the team can partner to make this plan successful including
- Randolph County Schools
- Randolph County's Safe Kids Coalition
- Archdale Police Department
- NCDOT Governor's Highway Safety Program

More detailed information on these issues is included in **Chapters 3 and 4**.

CHAPTER 3: PROGRAM RECOMMENDATIONS

This section includes recommendations for each of the Five Es of SRTS:

- Encouragement
- Education
- Enforcement
- Evaluation
- Engineering

Figure 10: Randolph County's Safe Kids Coalition teaches at a bike rodeo

Cost estimates for programs, activities and materials included in these recommendations are included in **Section 3.5**. A final section of recommendations (**Section 3.6**) is for policies that Archdale should consider that support walking and biking to school.

Recommendations are presented in a series of tables with the following fields:

- The "Strategy" field provides a brief description of the recommended strategy.
- The "Phasing, Frequency (Timeframe)" field suggests the timing of the recommended strategy. The term "Phasing" refers to the timing of initial implementation, of which there are two options. "Short-Term" means within 1 year after adoption of the SRTS Action Plan. 'Long-Term" means more than 1 year after adoption of the SRTS Action Plan. "Frequency" suggests how often a particular strategy might be implemented (e.g. Annually, Weekly), and "Timeframe" suggests the time of year, which may be a month, a season, or a range of months.
- The "Lead Coordinator (LC), Partner (P)" field provides the names of individuals or organizations that might assist with planning and implementation of each recommended strategy. The "Lead Coordinator" initiates coordination efforts and maintains momentum through planning and implementation by assembling a coordination team, scheduling meetings, and ensuring that necessary tasks get done. A "Partner" provides support with coordination, logistics, or needed materials.
- The "Considerations" field indicates issues that may need to be addressed or considered during the planning or implementation of a recommended strategy.

3.1 Encouragement

Encouragement strategies are aimed at increasing the number of families who walk and bike to school and fostering behaviors that improve the safety and comfort of pedestrians and bicyclists. Potential benefits include healthier and more active children, reduced air pollution, less traffic congestion around schools, and improved conditions for pedestrians and bicyclists. Key questions to address in identifying encouragement strategies are:

Figure11: Archdale Elementary School students walk to school during their International Walk to School Day celebration in October 2010

- What behavior should be encouraged?
- What is the most effective way to encourage these behaviors? And how often?
- What is the best way to coordinate encouragement activities with education and enforcement activities?

Consideration should also be given to how children with disabilities or those who may live too far to walk or bicycle may be included in any events or activities planned. The encouragement strategies recommended for Archdale are provided in **Table 7**.

Table 7: Archdale Encouragement Strategies

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
International Walk to School Day (PTA meeting associated) Walk to School Day is a one-day event that celebrates walking to school. In 2011, International Walk to School Day is Wednesday, October 5. Since October is designated as International Walk to School Month, schools commonly schedule their events for the date in October that works best for them. Walk to School Day is a good way to generate enthusiasm for walking and to raise community awareness about safety issues. Events can be as simple as a few kids and parents meeting to walk to school or very elaborate celebrations involving the whole school or community.	Short-Term, Annually (October)	• City of Archdale (LC) • School Principals and PTA (LC) • Fire Department (P) • Safe Kids Coalition (P)	• Preparations for elaborate celebrations must begin several months in advance to allow time to identify partners, plan activities, and promote the event. • It can be helpful to provide bicycle and pedestrian safety information to children and parents. • Include those students who cannot participate because they live too far from school. One option is walking at a school track during recess or PE class. Another option is to organize a park-and-walk site, where students can be dropped off, and walk the rest of the way to school. This would require notice to be sent out to parents and potentially to bus drivers in advance.

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Annual Bike Rodeo (in coordination with Bush Hill Festival). Consider distributing bike helmets (with help of Safe Kids Coalition) The Bush Hill Festival features a bike safety workshop on the eve of the festival (Bush Hill Bash). Children ages 7 to 12 are encouraged to bring their bikes and their helmets to learn and practice safe bicycling skills.	Short-Term, Annually (October)	• City of Archdale (LC) • Safe Kids Coalition(P) • PTA (P) • Cooperative Extension (P) • Piedmont Triad C.O.G. (P)	• This event already part of the festival's activities. It will be necessary to recruit volunteers to teach the bicycle safety workshop. Partner with Safe Kids Coalition to secure bike helmets for giveaways (if available).
Start a walking program with achievement tokens ("volksmarch") This community-based program encourages families to take long walks together through the city. These walking events could be formalized by the City or be a self-guided opportunity with maps posted on the City's website.	Medium Term	• School Principals and PTA (LC) • Student groups such as the Student Government Association and the Boy/Girl Scouts (LC) • City of Archdale (P)	• If the walks are to be formal events sponsored by the City or another partner, time and resources will be needed to organize and publicize the event. • Maps should be made and posted on the City's website. Student groups could help lead walking events.
Walking School Bus/Bicycle Train Walking school buses are adult supervised groups of students walking to school. They operate similarly to a bus in that they travel the same route each time, and pick up students at "stops" along the way. They can be loosely structured or highly organized. Bicycle trains are similar in organization but, utilize bicycles for transportation. The National Center for Safe Routes to School Guide for Walking School Buses is included in Appendix D of this plan.	Medium Term	• City of Archdale (LC) • School Principals and PTA (P)	• Need to identify routes where conditions support walking/biking and there is sufficient demand for supervised walking/biking. • Requires parents willing to walk/bike with children and learn about how walking buses and biking trains are organized and conducted. • More organized structure requires considerable planning. • Can include a meeting point in a parking lot so children and parents who must drive can participate. • Adults can rotate who will lead each time.

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Park and Walk Sites To reduce congestion around school sites, parents can park cars at designated locations near the school and walk to either drop-off or pick-up their children. Parking and walking to school has the added benefit of reducing pollution caused by cars idling, while waiting to move along in the often congested pick-up or drop-off lines. Archdale Elementary School identified a potential park and walk site at the Archdale Friends Meeting House, located on Trindale Road.	Short Term	• PTA (LC) • School Principals, especially at Archdale Elementary School (P)	• If the park and walk site is privately owned, it is good practice to get permission to use the parking lot during arrival and dismissal hours before formalizing the site as a park and walk location. • Churches and other activity centers that have peak hours on weekends make good candidates for park and walk sites. • Civic and public locations are ideal locations for park and walk site. • Endorsements from the school can help promote park and walk locations.

3.2 Education

Education strategies help children develop safety skills to use on the way to school and throughout their lifetimes. Education strategies also make parents and community members aware of the goals of SRTS programs and understand how their behavior influences safety conditions around the school. Key questions to address in identifying education strategies are:

Figure 12: Students practice identifying "left" from "right", while learning to look "left-right-left" before crossing the street

- What information needs to be conveyed to whom?
- What is the most effective way of conveying this information? And how often?
- What is the best way to coordinate education activities with encouragement and enforcement?

Education strategies recommended for Archdale are provided in **Table 8**.

Table 8: Archdale Education Strategies

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Parent workshop to promote health and fitness (PTA/PTO) To promote the benefits of the SRTS program, it would be helpful to educate parents about incorporating healthy habits into their lifestyles. Learning how an extra 30 minutes each day spent walking can improve a child's overall health may be the key to getting parents and their children to participate in Walking School Buses and other safe walking activities.	Long Term	• Principals and PTA (LC) • NC Cooperative Extension (P)	• Planning the workshop will take time and staff resources. • Materials can be limited to handouts and presentation visuals.
Pedestrian Safety Education Curriculum The National Highway Traffic Safety Administration is releasing a free, publically accessible student pedestrian safety curriculum. The curriculum covers grades K-5, and incorporates activities that support national standards of learning.	Long Term	• School PE Teachers (LC) • NC Cooperative Extension (P) • Safe Kids Coalition	• The curriculum can be taught in any class, but physical education classes may be the easiest to adapt. • Teachers may need to plan ahead to fit the curriculum into their schedules.

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Informational meeting for parents and community members Parents need to be aware of student travel opportunities. This includes opportunities to form a carpool or a walking school bus. Parents who drive their children to school also need to be aware of any changes to the school's drop-off and pick-up procedures. These opportunities and updates should be addressed during Back to School Night and other meetings with parents.	Short Term (Back to School Night)	• Principals and PTA (LC) • Local Police (P)	• Information given at Back to School Night should be delivered orally and with handouts. These materials can also be distributed over the summer in back-to-school packets. • To avoid confusion it is important to be clear when changes take effect. • It may be helpful to make these changes after Back to School Night.
Pedestrian safety education tied in with Halloween Safety education Randolph County's Safe Kids Coalition teaches students how to trick-or-treat safely by practicing safe walking skills and learning about personal safety habits.	Short Term (October)	• Principals and PTA (LC) • School Nurses (P) • Safe Kids Coalition (P)	• Schools should start requesting their events at the beginning of the school year, as resources are limited. • These events are provided at no cost to the schools. • The Safe Kids Coalition offers these workshops to schools at their request.

3.3 Enforcement

Safe Routes to School enforcement is a community effort that involves students, parents, school administration, and others, in addition to law enforcement. Enforcement activities target pedestrian and bicyclist behavior, as well as driver behavior. Key questions to address in identifying enforcement strategies are:

- Is speeding along streets that children use to walk to school a concern?

Figure 13: Everyone should play a positive role in enforcement including: students, parents, teachers, school administrators, crossing guards, police and the community.

- What behaviors can be addressed by enforcement?
- How should enforcement be implemented?
- Who should do the enforcing?
- Does enforcement include recognizing good behavior?

Enforcement strategies recommended for Archdale are provided in **Table 9**.

Table 9: Archdale Enforcement Strategies

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Targeted police enforcement during arrival and dismissal Targeted police enforcement by the Archdale City Police can help reduce the frequency of behaviors that put child pedestrians and bicyclists at risk.	Short-Term, Annually (September-June)	• City of Archdale Police (LC)	• Identify the locations and behaviors to target enforcement efforts. • Consistent, visible police presence should be the primary goal rather than ticketing. Nevertheless, behaviors (e.g. speeding) that pose the greatest danger to child pedestrians and bicyclists should be strictly enforced. • Advise parents and community members in advance of beginning the traffic enforcement effort. • Generate public support for enforcement action through outreach and education to parents and the community. • Developing a relationship with the local police district takes time but is critical for consistent and effective enforcement.
Crossing guards (trained and provided with necessary tools such as highly-reflective vests) Crossing guards play an important role in helping children cross the street at key locations, reminding drivers of the presence of pedestrians, and making parents feel more comfortable about letting their children walk and bicycle to school.	Short Term (Summer)	• Principals (LC) • Police Department (LC) • Parent Volunteers (P)	• Crossing guards must be well-trained. • If crossing guards are volunteers rather than police officers, they must understand that their job is to help students safely cross the street by increasing the visibility of the students crossing. They are not to direct traffic. • NCDOT has a developed the School Crossing Guard Training Program to help ensure that crossing guards have a consistent understanding of their roles and responsibilities.

Strategy	Phasing, Frequency (Timeframe)	Lead Coordinator (LC), Partners (P)	Considerations
Enforcement of school pick-up and drop-off protocol Continue to collaborate with School Resource Officers (SROs) and school staff to help with pick-up/drop-off and other driver behaviors directly around the school site. Remind parents that by observing rules such as staying in the pickup/drop-off assembly lines, not only makes for a smoother process, but also a safe one. When all modes observe the rules and act predictably, it is safer for all modes on the school site.	Short Term	• School Resource Officer (LC) • School Principals (LC) • School Staff (P) • Volunteers (P) • Archdale City Police (P)	• Meet with the SROs and school principals regularly to determine effective strategies and conduct evaluation efforts. • If cars are observed breaking traffic safety laws, it may be necessary to involve the Archdale City Police to help direct traffic and enforce traffic safety laws.
Drive Safe Campaign Send home informational packets to parents emphasizing safe driving around schools. Parents may not be aware how speeding can directly affect student safety in a school zone. The Drive Safe Campaign works on the principle that cars can only move as fast as the car in front. This is often called a Pace Car program. The campaign asks parents to sign a pledge which symbolizes their commitment to drive the speed limit. Other elements can include other safe driving practices such as respecting pedestrians in the crosswalks, giving cyclists 3 feet of clearance when passing, etc.	Short Term	• School Principals and PTA (LC) • City of Archdale (P) • City of Archdale Police Department (P)	• Must be accompanied by an education and outreach campaign. • Not all drivers who make the pledge will keep it, but the program can still be effective if enough people do. • Some schools have displayed their dedication by distributing bumper stickers to those who sign the pledge.

3.4 Evaluation

Evaluation is an important component of any SRTS program. Evaluation tools, such as the Student Tally and Parent Survey forms provided by the National Center for Safe Routes to School (NCSRTS), can be used to establish baseline information on student travel behaviors and measure the effectiveness of SRTS efforts over time. Key questions to address in with evaluation strategies are:

- How often to administer the Parent Survey and capture Student Tallies?
- What needs to be measured that is not captured by the Parent Survey or Student Tallies?

- How to get support from parents, teachers, and administrators?
- How to support local goals with evaluation strategies?
-

Conduct Parent Surveys and Student Tallies each spring. Repeating these evaluation instuments in a regular interval will allow the SRTS Team to determine the effectiveness of program projects and activities. The impact of the City's Comprehensive Pedestrian Plan and Comprehensive Bicycle Plan should be factored into the interpretation of the information and data. The City Planning Officer, who serves as the Team Leader for the SRTS Team, should be responsible for coordinating the Parent Survey and Student Tallies with school staff each spring.

Conduct pedestrian and bicycle counts every other year. Bi-annual counts of pedestrians and bicyclists at key locations along travel routes to school will provide additional data on the impact of the City's SRTS program. These counts will also help assess the impact of new pedestrian and bicycle infrastructure recommended in the City's Comprehensive Pedestrian Plan and Comprehensive Bicycle Plan. The NCDOT Division Engineer should be responsible for coordinating the counts and coordinating with the City Planning Officer. Potential locations to collect counts may be drawn from the key walking routes shown in **Figure 8** in **Section 2.5.02**.

Additional information on the Parent Surveys and Student Tallies conducted as part of developing this action plan is provided below:

> The Parent Survey is a two-page questionnaire intended to collect information from parents of K-8th graders about how their children travel to and from school, what barriers there are to walking or biking to and from school, and their attitudes about walking and biking to school. The questionnaire is available in English and Spanish. The questionnaire takes 5 to 10 minutes to complete and one questionnaire should be given per student. This information might be particularly useful to the four schools, because it can help identify issues that need to be addressed in order to achieve program goals. Information from parents might also identify unexpected opportunities to increase walking and biking to school.
>
> The Student Travel Tally Form is a one-page sheet used to count the number of students arriving to and departing from school by various travel modes (walk, bicycle, bus, car etc.). The form is designed to be administered by teachers or volunteers and takes approximately five minutes each morning for two days. The information collected has many applications, including learning travel patterns and estimating traffic congestion and environmental effects. Additionally, when gathered before and after the SRTS activity or project, the count information can help local SRTS programs measure any changes in walking, biking, and other forms of travel to and from school.

All four schools included in this Action Plan completed the Parent Survey and Student Tally forms in the winter and spring of 2010.

The evaluation strategies recommended for Archdale are provided in **Table 10**.

Table 10: Archdale Evaluation Strategies

Strategy	Phasing, Frequency, Time of Year	Lead Coordinator (LC), Partner (P)	Considerations
Parent Surveys and Student Tallies—The Parent Survey and Student Tally instruments provided by the National Center for Safe Routes to School are useful instruments for determining baseline information on student travel and perceived barriers to walking and biking; existing needs; and the success of SRTS efforts and needed adjustments.	Short-Term, Annually (Fall)	• School Principals (LC) • Parent volunteers (P)	• Requires teacher buy-in and administrative organization. • Getting parents to fill out and return surveys can be a challenge. Follow up is necessary. Consider a contest among classes for highest rate of return.
Annual walk audits and arrival/dismissal observations—The SRTS team reviews arrival/dismissal processes and walking environment noting new barriers and evaluating the impact of recent improvements.	Short-Term, Annually (Fall)	• School Principals (LC) • Parent volunteers (P)	• Walk audit and arrival/dismissal observation should include, but not be limited to, a review of recommendations in the action plan. • Walk audit and arrival/dismissal observation should include someone familiar with barriers children with disabilities face (i.e. a special education teacher or the parent of a child with a disability), to help ensure that these issues are identified during the audit.

Strategy	Phasing, Frequency, Time of Year	Lead Coordinator (LC), Partner (P)	Considerations
Photo Documentation – One way to monitor progress is to maintain a photo gallery of infrastructure improvements and program activities.	Medium Term, Ongoing	• School Principals (LC) • School Newspaper / Journalism club (P) • Students (P) • Parent volunteers (P)	• It may be expensive to acquire and maintain a set of cameras. Parent volunteers may have their own. One way to generate funding for disposable cameras or digital cameras is mini-grants. • It would be most helpful to maintain a photo gallery that is accessible to the whole team. It may be helpful to have a leader from this SRTS team lead the effort to keep everyone informed. • Some programs have found success with involving students in the photo documentation process. Students take photos of the walking environment and record brief essays on what the photos are showing. Students can also photograph program activities and evaluate their success.

3.5 Cost Estimates for Non Infrastructure Recommendations

The following are estimated non-infrastructure costs that qualify for Safe Routes to School funding that could potentially be required when implementing the program recommendations identified in **Chapter 3**. Cost may vary significantly depending on details of individual programs and size of schools.[20]

Bicycle Rodeo Program **$5,000.00**

Includes, but is not limited to the cost of bicycles, bicycle helmets, bicycle transport trailer, safety cones, electronic speed indicator, printed materials supporting program, etc.

Employed Crossing Guard Program **650.00/Month/Guard**

Estimated cost assumes crossing guards will be employed approximately three hours per day, five days per week. There may also be cost associated with training of crossing guards to ensure consistent execution of responsibilities.

[20] Non infrastructure information was obtained from FHWA Program Guidance: Safe Routes To School (SRTS). Available at: http://safety.fhwa.dot.gov/saferoutes/guidance/#toc123542199. Accessed June 2011.

Preparation of SRTS Promotional Murals **$ Cost will vary by location**

Estimated cost could vary significantly depending on location, size and detail of mural. Estimated cost does not include cost that may be associated with continual maintenance of mural to maintain a clean appearance.

Development of SRTS Walking/Biking Programs **$2,500.00**

Chapter 3 describes a variety of programs that can be developed to educate, enhance, encourage and enforce a successful Safe Routes to School program. Each of these programs would require the development, production and distribution of many printed materials including brochures describing the details of the program, maps providing safe walking and biking routes, promotional posters, etc. Some programs also include suggestions for providing small incentive prizes. The cost estimate provided above is a "ball park" estimate for what potential initial cost could be to kick-off a typical program. The cost could vary significantly depending on the size of the school, the level of participation, use of existing resources available at no cost, etc.

In general, non-infrastructure costs that could qualify for Safe Routes to School funding include, but are not limited to the following list. On average, no more than three of the items described below could be funded with $2,500.

- Creation and reproduction of promotional and educational materials.
- Bicycle and pedestrian safety curricula, materials and trainers.
- Training, including SRTS training workshops that target school- and community-level audiences.
- Modest incentives for SRTS contests and incentives that encourage more walking and bicycling over time.
- Safety and educational tokens that also advertise the program.
- Photocopying, duplicating, and printing costs, including CDs, DVDs, etc.
- Mailing costs.
- Costs for data gathering, analysis, and evaluation reporting at the local project level.
- Pay for substitute teacher if needed to cover for faculty attending SRTS functions during school hours during one school year
- Costs for additional law enforcement or equipment needed for enforcement activities.
- Equipment and training needed for establishing crossing guard programs for one school year.
- Stipends for parent or staff coordinators. (The intent is to be able to reimburse volunteers for materials and expenses needed for coordination and efforts. The intent is not to pay volunteers for their time. In some cases, however, a State may permit paying a stipend to a "super volunteer" to coordinate its local program(s). This is an important possibility to keep open for low-income communities. It may be beneficial to set a limit on the maximum value of a stipend, such as $2,000/school year.).
- Costs to employ a SRTS Program Manager, which is a person that runs a SRTS program for an entire city, county, or some other area-wide division that includes numerous schools for one year. (Program Managers may coordinate the efforts of numerous stakeholders and volunteers, manage the process for implementation at the local or regional level, and may be responsible for reporting to the State SRTS Coordinator.)
- Costs to engage the services of a consultant (either non-profit or for-profit) to manage a SRTS program for one year as described in the prior bullet.

3.6 Policies, Ordinances, Plans and other SRTS-supportive Best Practices

Section 2.2 of this plan includes a review of existing policies, ordinances and regulations that may support walking and biking to school. Some recommendations for amending or adding to these policies and practices are included earlier in this chapter (**Chapter 3**).[21] However, there are many other policies and practices for communities to consider that support SRTS. This section includes a list of "best practices" in three areas: City policies, school district policies, and individual school policies. The Archdale SRTS team is encouraged to review this list to determine those that may be considered to support its SRTS program (and safe walking and biking, in general).

3.6.01 City Policies

The policies and practices that can be adopted and implemented by a city are included in **Table 11**. The policies listed in the left-hand column provide a strong foundation for walking and biking. Specifics for design and maintenance/enforcement within each of these policies are listed in the center and right-hand columns, respectively.

Table 11. Best Practices for City Policies and Practices that Support SRTS.

Policy	Design Standards	Maintenance/Enforcement
Complete Streets	Develop and utilize design standards and practices that are consistent with a Complete Streets policy, such as the consideration of a road diet to reduce speeds, and crashes, and to create space for bicycle facilities.	
Neighborhood Traffic Calming	Develop and implement neighborhood traffic calming strategies and devices for the travel routes to schools. Examples include curb extensions (pinch points), raised crosswalks, traffic circles, raised channelization islands, reduced corner radii, speed humps, rumble strips, curb bulges or planters, and pavement treatments (cobbles, bricks, etc.).	
School Zones	Signage designating school zone within specific distance of school	
	Speed limits • Posted speed limits within school zone as low as possible (e.g., 10 mph below existing speed limit) and consider a standards school zone speed limit, such as 25 mph. • Posted speed limit signs includes specific hours reduce speed limit is in effect • Driver speed feedback signs as part of the speed limit assembly to bring driving speeds to the	Higher penalties for speeding in school zone during posted hours (e.g., $250 – same as for a work zone).

[21] The words "policy" and "practice" are used here to refer to city codes, zoning ordinances, maintenance and enforcement practices, resolutions, etc., that formally or informally enable and govern walking and biking activity.

Policy	Design Standards	Maintenance/Enforcement
	attention of motorists. Note: NCDOT is in the process of studying the benefits of this signage with completion of the studies anticipated by 2013.	
	Prohibition of cell phone use/texting in school zone (for motorists and pedestrians).	Progressive ticketing to support behavior change.
Sidewalks	Required for development and redevelopment projects on both sides of street, especially where development is within 2 miles of a school.	
	Minimum width of 5 feet. Wider sidewalks along roads closer to and bordering school.	
	Includes 3-foot buffer between edge of pavement and sidewalk.	
	Prohibition of parking on sidewalks.	Higher penalties for parking on sidewalks.
ADA Compliance	ADA plan to address non-compliance per PROWAG, e.g., pinch points, cracks and heaves, and curb ramps.	
Bicycle Facilities	Install along key travel routes to school, with a preference for buffered lanes.	Include in routine street sweeping/cleaning and snow removal standards.
	Minimum width of 6 feet for bike lanes. Preferable to include bike lanes[22] on two-lane residential/collector streets with low posted speed limit where the 6-foot wide bike lanes are placed beside 12-foot wide travel lanes and where there is an absence of complicated intersections and a limited number of driveways.	Include bike lanes striping as part of routine striping maintenance to ensure visibility.
Shared-use/Multi-use pathways	Minimum width of 10 feet for a two-directional shared-use/multi-use pathways widening for higher anticipated usage by bicyclists and pedestrians. If located parallel to a roadway due to a lack of an alternative location, minimum separation of 5 feet should be provided between the roadway and pathway. An alignment with the fewest intersections with roadways should be chosen. A multi-use pathway should not just end, leaving bicyclists stranded with no nearby bikeway connection. It must have a well-defined origin and destination.	Include in routine street sweeping/cleaning and snow removal standards.

[22] A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists. Streets striped with bicycle lanes should be part of a connected bikeway system rather than being an isolated feature. *NCDOT – Bicycle Facilities Guide: Types of Bicycle Accommodations* http://www.ncdot.org/bikeped/projectdevelopment/bicycle_project_type/ accessed on August 10, 2011.

Policy	Design Standards	Maintenance/Enforcement
Intersections	High visibility crosswalk striping at school crossings.	
	Include pedestrian signals at all signalized intersections within 2 miles of a school.	
	Pedestrian signals/Signal timing • Meets 2009 MUTCD standards • Consideration for additional time for crossings along school perimeter	
	Prohibit Right Turn on Red (RTOR) in school zones during school arrival and dismissal hours (as posted on speed limit signs).	Higher penalties for violating No RTOR.
	Prohibition of parking on crosswalks.	Higher penalties for parking on crosswalks and for failure to yield for pedestrians in crosswalks.
	Must yield to pedestrians in crosswalk.	
Crossing Guards		All crossing guards must complete training included in 2009 MUTCD.
School Travel Map		Map of walking and biking conditions along routes leading to schools and around the school perimeter that is updated annually [23]
Data/GIS		Use standard identification system for segments of the public ROW so data layers are join-able. Update GIS data regularly (i.e., use GIS data as asset management tool).

3.6.02 School District Policies

School districts can adopt policies that support and complement SRTS. Policies such as the ones listed below will provide affirmation to individual schools that SRTS is a district-wide priority.

- A wellness policy that connects physical activity and classroom curricula with SRTS.
- General statement of support for walking and biking to school (i.e., no prohibition on walking and biking to school).
- Busing policies and practices that
    - adhere to the 1.5 mile radius for busing students, with few exceptions for hazard busing and none for courtesy busing,
    - direct school district staff to work with the city to mitigate unsafe locations within the walk zone, and

[23] GIS files used in the development of figures for this SRTS Action Plan can be made available in electronic format to the school/community via request to NCDOT. The school/community would be responsible for use of the files, including any needed verifications or revisions.

    - offset busing reductions with support for walking and biking to school, e.g., train some bus transportation personnel as adult crossing guards.
- School siting policies that
    - place a high priority or walking and biking access as a criteria,
    - make North Carolina standards for acreage as optional (the standards are guidelines, not requirements),
    - require a complete multi-modal transportation system on-campus, and
    - require on-campus walking and biking connections with the surrounding area.
- A permission-slip policy that includes all school access modes, not just those walking and biking to school.
- A Transportation Director's position description which includes responsibilities for all access modes, not just bus access.

3.6.03 Individual School Policies

These policies contribute to walking and biking to school. While they may not have the force of law, these policies are important elements of the school community's commitment to safe travel for all students.

- Pick-up/Drop-off Policy that ensures a pick-up/drop-off plan is in place that reduces the number of motor vehicles near school entrances or locations where students are walking and biking to school. The overall goal is to reduce the potential for motor vehicle-pedestrian/bicyclists conflicts.
- Dismissal Policy that increases the attractiveness of walking and biking to school through dismissal sequence by travel mode (i.e., students walking and biking would not have to wait until bus riders and students traveling by private motor vehicle leave).
- Bicycle Parking Policy that provides adequate bike parking in locations that are visible from the school building, well lit, and protected from wet weather.

CHAPTER 4: ENGINEERING RECOMMENDATIONS

SRTS engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding schools. These improvements focus on reducing conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails, and bikeways. Coupled with the non-engineering strategies, these infrastructure improvements can potentially reduce relatively high traffic speeds and other unsafe driving behavior.

This section covers the engineering strategies recommended for Archdale. **These recommendations are for planning purposes only and may require further engineering analysis, design, and public input before implementation.**

The recommendations are organized into two sections, General Engineering Recommendations and Location-Specific Engineering Recommendations.

4.1 General Engineering Recommendations

- The City of Archdale should install sidewalks and/or greenways alongside all roads connecting residences, schools and recreational areas.
- The City of Archdale should conduct a thorough review of signage and pavement markings in the Archdale school zones and upgrade pavement markings and signage where outdated, worn, or inappropriately positioned in accordance with the 2009 MUTCD.
- The City of Archdale should prioritize sidewalk maintenance and cleaning on routes used by Archdale students to travel to school.
- The City of Archdale should prioritize new sidewalk installations on routes used by Archdale Students to travel to school.
- The City of Archdale must comply with the Americans with Disabilities Act (ADA) standards when designing infrastructure improvements.
- The City of Archdale should consider reducing the posted speed limits and incorporating other traffic calming measures on Suits Road and Archdale Road to improve pedestrian and driver safety.
- The City of Archdale should install buffers along sidewalks within two miles of the school site.
- The City of Archdale should install pedestrian signals with the countdown feature along identified or anticipated walking routes.
- The City of Archdale should develop a design manual to implement complete streets elements needed to increase pedestrian safety within three blocks of schools.
- The City of Archdale should look for opportunities to coordinate roadway improvement projects and the Pedestrian Network Plan projects with the recommendations in this SRTS Action Plan.

4.2 Location-Specific Engineering Recommendations

4.2.01 Location-Specific Engineering Recommendations Summary

Table 12, **Table 13**, **Table 14**, and **Table 15** (below) show recommendations for each school organized by a corridor, which is meant to capture a grouping of intersections, roads and off-road pathways. Each corridor has one or more recommendations that apply within the corridor. The Archdale SRTS Team evaluated the recommendations and ranked them by priority. These priority rankings will be helpful to

the team as they pursue funding grants for implementation. The team used two criteria for deciding which recommendations would be given a "high" priority ranking. The first criterion was the potential quantity of students who would benefit from the improvement. This was determined by analyzing maps of student addresses and the school attendance boundary. The second criterion was the potential to improve student safety, specifically at crossings where student walkers and bikers would be crossing the path of vehicles. All other recommendations were assigned "medium" priority. High-priority recommendations should be given preference over medium-priority recommendations if they are equal in cost and feasibility. The team recognizes that some medium-priority recommendations may be implemented before some of the high-priority recommendations due to cost and overall feasibility.

Additional detail on each of these recommendations, including maps showing where they are located, is provided in **Sections 4.2.02, 4.2.03, 4.2.04, and 4.2.05**.

Table 12: Summary of Location Specific Engineering Recommendations for Archdale Elementary School

Corridor	Archdale Elementary School: Recommendations by Location	Priority
AE1	*Trindale Road between N. Main Street and Archdale Road* • Install sidewalk on the south side of Trindale Road.	Medium
	Trindale Road between Bonnie Place and Wynnewood Drive • Install a sidewalk on the south side of Trindale Road from Bonnie Place to Wynnewood Driveto provide a separated pathway for students to use when walking to school. • Consider marking sidewalks that cross private commercial driveways to indicate the potential of pedestrians to motorists. • Stripe high-visibility crosswalk in the ladder style[24] and install ADA-compliant curb ramps across Bonnie Place and Hillcrest Lane.	Medium
	Intersection of Trindale Road and Bonnie Place (at location of recommended park and walk lot) • Stripe a high visibility crosswalk across the eastern leg of the intersection of Bonnie Place and Trindale Road. • Install school crossing signage at the marked crossing.	High

[24] Current design is high visibility, but it is in the parallel bars style. The ladder style is more visible to motorists.

Corridor	Archdale Elementary School: Recommendations by Location	Priority
	Intersection of Trindale Road and N. Main Street • Stripe high visibility crosswalks at all four legs of the intersection. • Install school crossing signage at all marked crossings. • Retrofit existing curb ramps to meet ADA standards. • Install pedestrian signal heads at all four legs of the intersection with countdowns. Time the signals per the 2009 MUTCD standard of no more than 3.5 feet per second. • Install triangular pedestrian refuge islands on the northwest and southeast corners of the intersection. • Extend the curb at the northeast and southwest corners, tightening the curb radii to bring the pedestrian into view and shorten the crossing distance. • Move the stop bars back behind the curb ramps to improve this intersection for pedestrians.	High
	Intersection of Trindale Road and Archdale Road • Retrofit existing curb ramps to meet ADA standards. • Stripe high visibility crosswalks across the intersection. • Install countdown signals to accompany existing pedestrian signal heads.	Medium
AE2	*Archdale Road between W. White Drive and Trindale Road* • Install sidewalks on the east side of Archdale Road between Trindale Road and Northeast Drive. • Stripe high visibility crosswalks across the driveways on the east side of Archdale Road. • Install sidewalks on the west side of Archdale Road between W. White Drive and Northeast Drive.	Medium
	Intersection of Archdale Road and W. White Drive • Stripe high visibility crosswalks on all three legs of the intersection.	

Corridor	Archdale Elementary School: Recommendations by Location	Priority
AE3	*W. White Drive between Archdale Road and N. Main Street* • Install "School" Pavement markings at both approaches to the school driveway on W. White Drive. • Install sidewalks on south side of W. White Drive between Archdale Road and N. Main Street and install high visibility crosswalks across White Drive the intersections of Bonnie Place and N. Main Street. • Stripe a high visibility crosswalk across W. White Drive where it lines up with the end of the current sidewalk on the north side of West White Drive. • Install sidewalks on the north side of W. White Drive to close the gap between the existing sidewalk and Archdale Road. • Widen existing sidewalks on the north side of the street to meet ADA standards and install a high visibility crosswalk across Bonnie Place. • Consider eliminating parking during school drop-off and pick- up hours. • Consider making W. White Drive a one way Street (permit traffic moving westward) during drop-off and pick-up hours.	High
AE4	*Bonnie Place between Trindale Road and W. White Drive* • Widen existing sidewalks on the east side of the street to meet ADA standards.	Medium

Table 13: Summary of Location Specific Engineering Recommendations for John Lawrence Elementary School

Corridor	John Lawrence Elementary School: Recommendations by Location	Priority
JL1	*Suits Road between S. Main Street and Weant Road* • Install sidewalks on south side of the street. • Install sidewalks on the north side of the street. This side has higher priority over the recommended sidewalk for the south side of the street. • Install high visibility crosswalks across all driveways on this segment. • Install school crossing signage at all marked crossings. • Move the "School" pavement marking so that is west of the intersection with Weant Road.	High
	Suits Road between the Weant Road and Trotter County Road • Install sidewalks with a clear zone distance of grass or curb and gutter between the sidewalk and travel lane on the north and south sides of the road. • Install enforcement signage and/or establish a law enforcement patrol to discourage parking in the clear zone distance. • Install high visibility crosswalks across all driveways on this segment. • Install high visibility crosswalks across the two roads (privately owned) that intersect with Suits Road. • Install school crossing signage at all marked crossings.	Medium
	Suits Road between S. Main Street and Trotter County Road • Reduce the speed limit to 35 mph and reduce it further to 25 mph within school zone.	High
JL2	*Weant Road between Suits Road and Trey Lane* • Install sidewalks on both sides of the street between Suits Road and Trey Lane. Higher priority is given to the east side of the street.	High
	Intersection of Weant Road and Suits Road • Install a high-visibility raised crosswalk on western leg of the intersection. • Install a high-visibility crosswalk across the northern leg of the intersection. • Install school crossing signage at the marked crosswalks.	High

Table 14: Summary of Location Specific Engineering Recommendations for Trindale Elementary School

Corridor	Trindale Elementary School: Recommendations by Location	Priority
TE1	*Balfour Drive between Archdale Road and Brookhollow Drive* • Install sidewalks on the north side of Balfour Drive. • Stripe high visibility crosswalks across Barrett Drive, the staff parking lot driveway, Trindale School Drive, and Brookhollow Drive. • Strip a high visibility crosswalk on the western leg of the intersection of Balfour Drive and Trindale School Drive. • Install school crossing signage at the marked crosswalk.	High
	Balfour Drive between Brookhollow Drive and S. Main Street • Install sidewalks on the north side of Balfour Drive. • Install high visibility crosswalks across Brookhollow Lane. • Install school crossing signage at the marked crosswalk.	Medium
	Intersection of N. Main Street and Balfour Drive • Install pedestrian countdown signal heads for all four legs of the intersection. • Retrofit existing curb ramps to meet ADA standards. • Stripe high visibility crosswalks at all four legs of the intersection and move the stop bars behind the curb ramps. • Install school crossing signage at all marked crossings.	Medium
TE2	*Off-road trail segment between the School Property, Beard Avenue and William A. "Bill" Aldridge Ball Park.* • Construct a greenway trail to connect the school property to the proposed greenway (part of Archdale's Pedestrian Network Plan, 2009) trail that connects Beard Avenue, and William A. "Bill" Ball Park. • Construct greenway trails to connect William A. "Bill" Ball Park to Carroll Street and Frazier Street (not part of Archdale's Pedestrian Network Plan, 2009). • Trim vegetation located along pedestrian pathways between the two sites. • Gates for the chain link fence on the school property will need to be opened to provide access to the school.	Medium
TE3	*Trindale School Drive (School Main Entrance Driveway)* • Install a sidewalk on the north side of the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Balfour Drive.	High

Table 15: Summary of Location Specific Engineering Recommendations for Archdale-Trinity Middle School

Corridor	Archdale-Trinity Middle School: Recommendations by Location	Priority
ATM 1	*Off-road Greenway Trail Connection between School Property and existing trail, north of Roby Drive* • Construct a greenway trail to connect the school property to the existing trail connection, located north of Roby Drive. *Note*: *There are many possibilities for connecting the greenway to the school. This plan does not limit the potential connections to one location.*	High
ATM 2	*Archdale Road between Trinity Road and Winchester Court* • Install sidewalks on the north side of Archdale Road. • Install "School" Pavement markings on Archdale Road for westward moving traffic.	Medium
	Archdale Road between Winchester Court and School Entrance • Install sidewalks on the north side of Archdale Road.	High
	Archdale Road between School Entrance and Springwood Lane • Install sidewalks on the north side of Archdale Road. • Install "School" Pavement markings on Archdale Road for westward moving traffic.	Medium
	Archdale Road between Trinity Road and Springwood Lane • Reduce speed limit from 35 mph and 25 mph within school zone.	Medium
	Archdale Road between Springwood Lane and Lane Drive • Install sidewalks on the north side of Archdale Road, north of the railroad tracks.	Medium
	Lane Drive between Archdale Road and Linda Drive • Install sidewalks on the north side of Lane Drive, north of the railroad tracks.	Medium
	Intersection of School Entrance Driveway and Archdale Road • Stripe a high visibility crosswalk across Archdale road on the western leg of the intersection. • Install pedestrian signal heads with countdowns at all legs of the intersection. • Stripe a high visibility crosswalk across the school entrance driveway. • Install school crossing signage at all marked crosswalks.	High

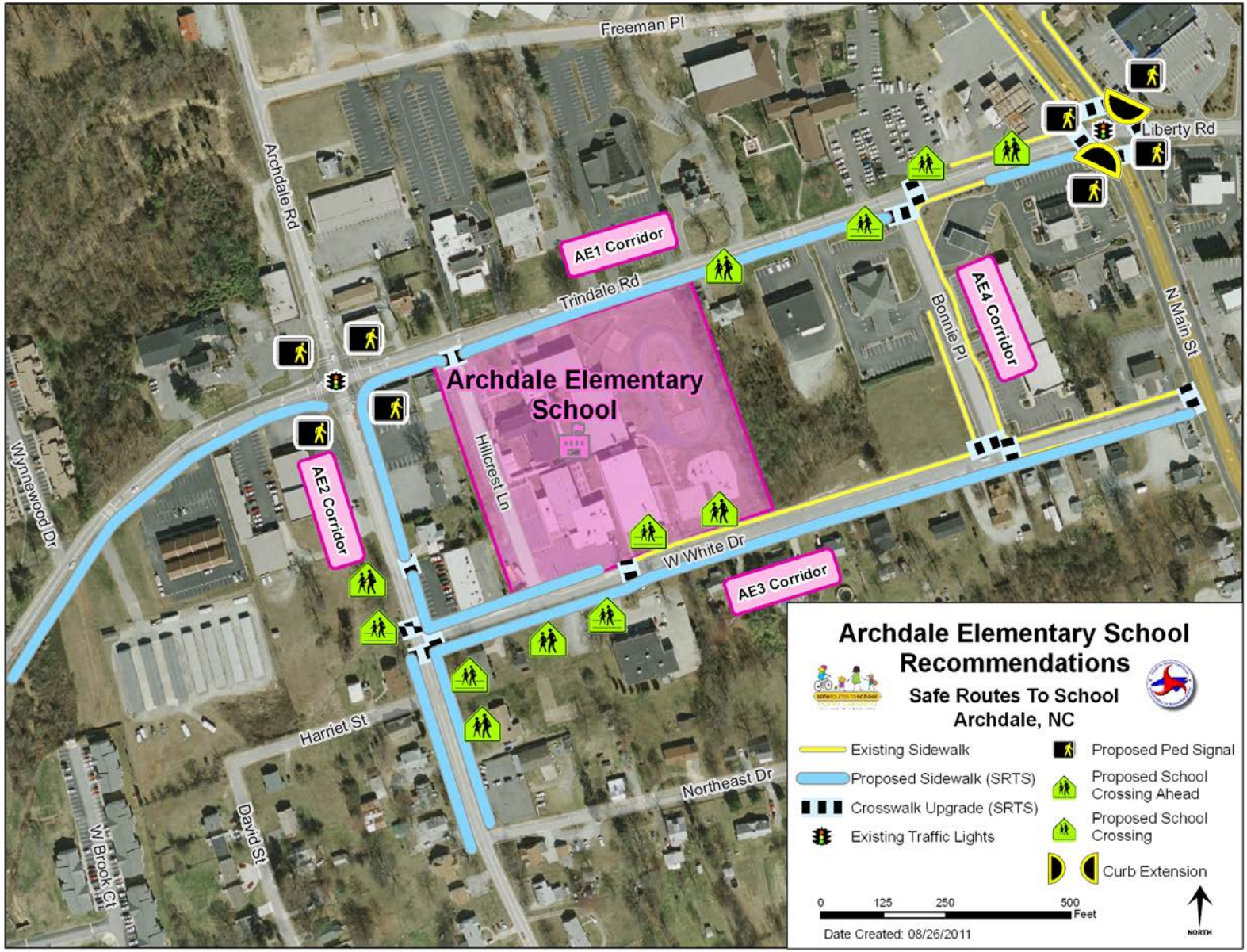
Corridor	Archdale-Trinity Middle School: Recommendations by Location	Priority
ATM3	*School Property* • Install inverted-U bike racks on the school property. Preferred placement would be in the school plaza under the canopy.	Medium
	School Main Entrance Driveway • Install a sidewalk on the west side of the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Archdale Road.	High

4.2.02 Location-Specific Engineering Recommendations Detail

4.2.02.01 Detail for Archdale Elementary School

This section provides additional detail on the engineering recommendations outlined in **Table 12. Figure 14** shows where the recommendation sites for each school are located. Each corridor is more fully described with photographs, issues and recommendations. Some corridors have multiple sites.

Figure 14: Archdale Elementary School Location-Specific Engineering Recommendations Detail Overview Map



Corridor AE 1	Trindale Road	Engineering Detail

Overview

Archdale Elementary School is located on the corner of Trindale Road and Hillcrest Lane in an area of mixed residential and commercial property. Trindale Road is categorized as Minor Arterial in the NCDOT Urban Functional Classification System and it borders the school on its north side. Some sidewalk is present on both sides of Trindale Road with a 2-foot grass buffer. Trindale connects Archdale Road and N. Main Street, two busy thoroughfares lacking sidewalks or any other pedestrian facilities. Most students ride the bus or are driven by parents.

Figure 15: Trindale Road, looking westbound.

Trindale Road

Issues

- Trindale Road is used as a connection between N. Main Street and Archdale Road and carries considerable amount of traffic.
- Trindale Road does not have sidewalks on either side of the road past the Archdale Friends Meeting House property, about one half-block from the school entrance.
- Several commercial and residential driveways have access with Trindale Road. These driveways may become conflict points if motorists are unaware of pedestrians traveling along the sidewalk.

Recommendations

- Install a sidewalk on the south side of Trindale Road from Bonnie Place to Wynnewood Driveto provide a separated pathway for students to use when walking to school.
- Consider marking sidewalks that cross private commercial driveways to indicate the potential of pedestrians to motorists.
- Stripe high-visibility crosswalks in the ladder style and install ADA-compliant curb ramps across Bonnie Place and Hillcrest Lane.
- Install school crossing signage at all marked crossings.

Intersection of Trindale Road and Bonnie Place

Issues

- Archdale Friends Meeting House parking lot serves as a park and walk location for parents and students during arrival and dismissal. Families must cross the roadway without the benefit of pedestrian crossing facilities such as crosswalks or school crossing signs.
- The crossings at this location are unmarked. Motorists may be unaware of pedestrians approaching the intersection and attempting to cross Trindale Road.

Figure 16: Crossing from the Archdale Friends Meeting House, looking eastbound

Recommendations

- Stripe high-visibility crosswalk across Trindale Road at the intersection with Bonnie Place to make the crossing more visible to motorists.
- Install school crossing signage at the marked crossing.
- Stripe a high visibility crosswalk across the eastern leg of the intersection of Bonnie Place and Trindale Road. To control access along Trindale Road, and to promote safety for students using the parking lot as a park and walk location, close off the western most entrance to the parking lot with a cone during school arrival and dismissal hours.

Intersection of Trindale Road and N. Main Street

Figure 17: Intersection of Trindale Road and North Main Street, looking eastbound.

Issues

- There are students who live in the neighborhood east of N. Main Street, but the intersection of N. Main Street and Trindale Road serves as a barrier because of its width and the lack of pedestrian crossing facilities. Pedestrians must cross 4 distances between 40 and 90 feet without the benefit of refuges or without pedestrian signals.

Recommendations

- Stripe high visibility crosswalks at all four legs of the intersection.
- Install school crossing signage at all marked crossings.
- Retrofit existing curb ramps to meet ADA standards.
- Install pedestrian signal heads at all four legs of the intersection with countdowns. Time the signals per the 2009 MUTCD standard of no more than 3.5 feet per second.
- Extend the curb at the northeast and southwest corners, tightening the curb radii to bring the pedestrian into view and shorten the crossing distance.
- Move the stop bars back behind the curb ramps to improve this intersection for pedestrians.

Intersection of Trindale Road and Archdale Road

Figure 18: Intersection of Trindale Road and Archdale Road, looking eastbound.

Issues

- There are students who live in the neighborhood west of Archdale Road, but the intersection of N. Main Street and Trindale Road lacks a safe pedestrian crossing.

Recommendations

- Retrofit existing curb ramps to meet ADA standards.
- Install countdown signals to accompany existing pedestrian signal heads.

Corridor AE 2	Archdale Road	Engineering Detail

Overview

Archdale Road is categorized as Minor Arterial in the NCDOT Urban Functional Classification System and is in very close proximity to the school. The road could be used by parents and students to walk to Archdale Elementary School, however the road lacks sidewalks.

Figure 19: Archdale Road, southbound between Trindale Raod and W. White Drive.

Archdale Road

Issues

- Archdale Road does not have sidewalks.

Recommendations

- Install sidewalks on the east side of Archdale Road between Trindale Road and Northeast Drive.
- Stripe high-visibility crosswalk across access drive on Archdale Road.
- Install sidewalks on the west side of Archdale Road between W. White Drive and Northeast Drive.
- Install school crossing signage at all marked crossings.

Intersection of Archdale Road and W. White Drive

Issues

- This intersection lacks pedestrian crossing infrastructure.

Recommendations

- Stripe high visibility crosswalks on all three legs of the intersection.
- Install school crossing signage at all marked crossings.

Overview

W. White Drive is a two-lane road that borders the southern boundary of the school property. The posted speed limit is 35 mph, with parking permitted along the side of the road and a sidewalk.

Figure 20: W. White Drive, eastbound. The school campus is on the left (north) side of the road.

W. White Drive

Issues

- The roadway lacks school zone pavement markings.
- Vehicles queuing on W. White Drive during drop-off and pick-up times may spills onto Archdale Road. This causes significant congestion such that motorists have been observed darting out of line and driving on the wrong side of the road to avoid waiting through the line.

Recommendations

- Install “School” Pavement markings at both approaches to the school driveway on W. White Drive.
- Install sidewalks on south side of W. White Drive between Archdale Road and N. Main Street.
- Widen existing sidewalks on the north side of the street to meet ADA standards and install a high visibility crosswalk across Bonnie Place.
- Stripe a high visibility crosswalk across W. White Drive where it lines up with the end of the current sidewalk on the north side of West White Drive.
- Install sidewalks on the north side of W. White Drive to close the gap between the existing sidewalk and Archdale Road.
- Install school crossing signage at all marked crossings.
- Consider eliminating parking during school drop-off and pick- up hours.
- Consider making W. White Drive a one way Street (allowing westward moving traffic) during drop-off and pick-up hours.

Overview

Bonnie Place connects Trindale Road to W. White Drive. The sidewalks on the east side of Bonnie Place connect the two streets, thereby connecting student walking routes to the school property.

Figure 21: Bonnie Place sidewalks on the east side of the street

Bonnie Place

Issues

- The existing sidewalks are narrow, which makes it difficult for pedestrians to pass one another, especially if one of the pedestrians is using a walk device. Narrow sidewalks also limit sociability when several students walk to school together.

Recommendations

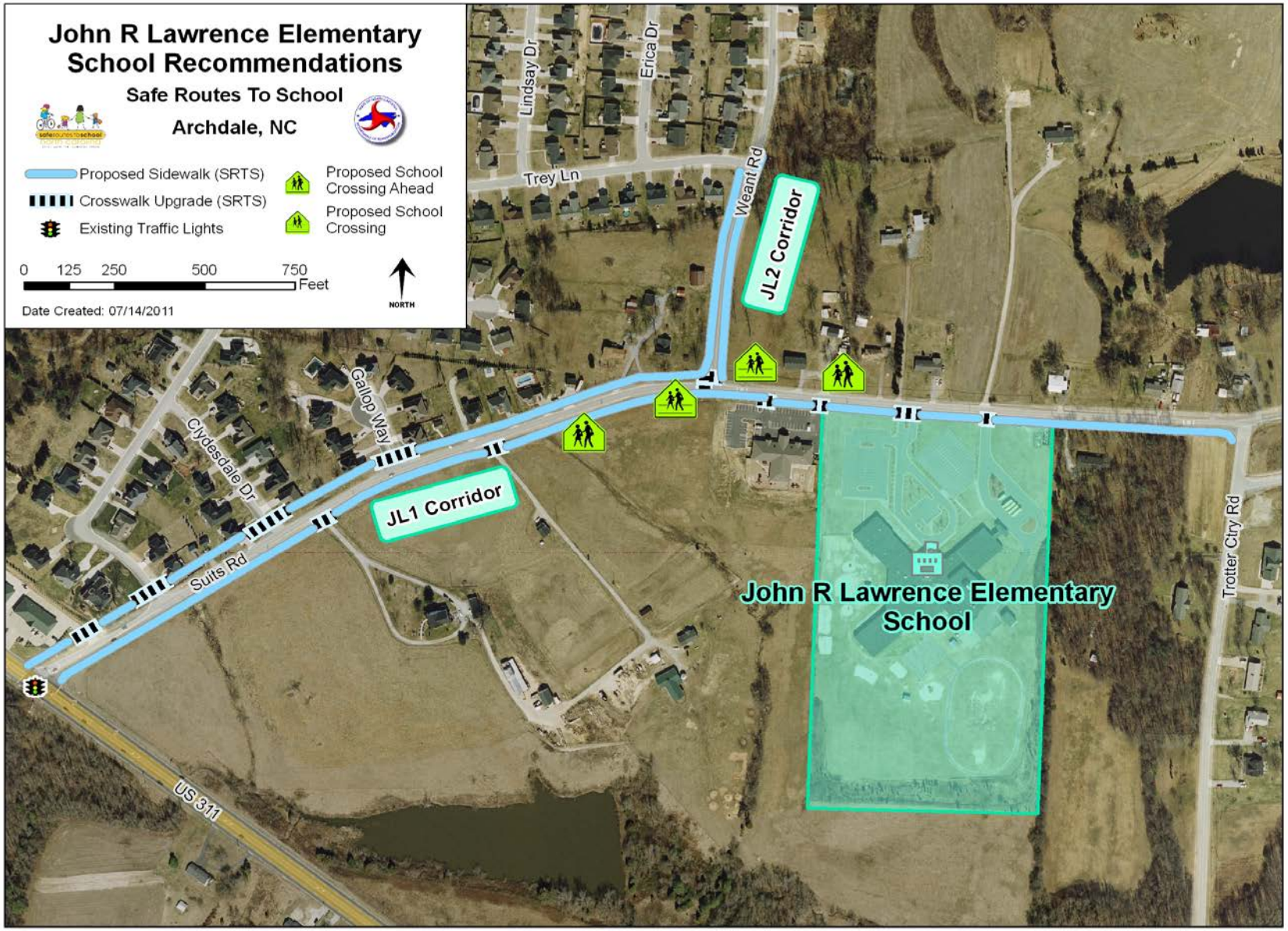
- Widen existing sidewalks on the east side of the street, maintaining the existing buffer.

4.2.03 Location-Specific Engineering Recommendations

4.2.03.01 Detail for John Lawrence Elementary School

This section provides additional detail on the engineering recommendations outlined in **Table 13**. **Figure 22** shows where the recommendation sites for each school are located. Each corridor is more fully described with photographs, issues and recommendations. Some corridors have multiple sites.

Figure 22: John Lawrence Elementary School Location-Specific Engineering Recommendations Detail Overview Map



Overview

Suits Road is a two-lane road that connects neighborhoods to S. Main Street. There are neither sidewalks nor curb and gutter on either side of the street. A narrow gravel shoulder and the grass next to the shoulder serve as a pedestrian walking facility. The school fronts this road, and all vehicles enter and exit the school from it. Although Suits Road carries relatively low volumes of motor vehicle traffic at most times of day, the team noted that traffic volumes increase here during school arrival and dismissal times.

Suits Road

Issues

- Parents parked along the roadway, while waiting to pick up their children, encroach on the travel lane. Other motorists trying to get around the parked cars were observed passing them in the opposite lane, illegally. This creates a safety issue for both motorists and pedestrians traveling home from school.
- The lack of pedestrian facilities creates a disincentive to walking to school.
- While there is little residential development on the south side of Suits Road, it is zoned residential for future development and will need sidewalks once more homes are built and occupied.

Recommendations

- Install sidewalks with a clear zone distance of grass or curb and gutter between the sidewalk and travel lane on the north and south sides of the road.
- Install enforcement signage and/or establish a law enforcement patrol to discourage parking in the clear zone distance.
- Install high visibility crosswalks across the two roads and four driveways located on this segment.
- Install school crossing signage at all marked crossings.
- Move the “School” pavement marking so that it is west of the intersection with Weant Road. This will make the approaching school crossing more visible to motorists.

Figure 23: Suits Road, westbound

Overview

Weant Road is a two-lane, residential road that provides the main access to Suits Road. Students use this road to walk to school, as it is the only connection between the neighborhoods north of the school and Suits Road. Pedestrians currently use a narrow gravel shoulder and the grass next to the shoulder to travel along Weant Road. The future land use plan map shows that the areas around Weant Road will be residential developments. Connecting these future developments to the school will be important for future student pedestrian travel.

Weant Road

Issues

- The road is located in the neighborhood adjacent to the school but the road lacks sidewalks.
- The high volume of arrival and dismissal motor vehicle traffic, including buses reduces pedestrian visibility along the roadway.

Recommendations

- Install sidewalks on both sides of the street between Suits Road and Trey Lane. Higher priority is given to the east side as this is where most of the students live.
- Connect sidewalks to those recommended for the south side of Suits Road.

Intersection of Weant Road and Suits Road

Issues

- Pedestrians crossing infrastructure is absent at all three legs of the T-intersection. Motorists may not be aware of pedestrians attempting to cross Weant Road or Suits Road.

Recommendations

- Install a high-visibility raised crosswalk on western leg of the intersection.
- Install a high-visibility crosswalk across the northern leg of the intersection.
- Install school crossing signage at the marked crosswalks.

Figure 24: Weant Road, northbound, north of the intersection with Suits Road.

4.2.04 Location-Specific Engineering Recommendations

4.2.04.01 Detail for Trindale Elementary School

This section provides additional detail on the engineering recommendations outlined in **Table 14**: Summary of Location Specific Engineering Recommendations for Trindale Elementary School. **Figure 25** shows where the recommendation sites for each school are located. Each corridor is more fully described with photographs, issues and recommendations. Some corridors have multiple sites.

Figure 25: Trindale Elementary School Location-Specific Recommendations Detail Overview Map

Overview

Figure 26: Balfour Drive, looking eastbound.

Balfour Drive is a two-lane roadway with a speed limit of 25mph. It is important to evaluate for this plan because it runs directly in front of Trindale Elementary School. Residential neighborhoods are located to the east and west of the school, with a baseball field on the north and Balfour Drive on the south side. Balfour Drive serves as a connector between N. Main Street and Archdale Road, classified as Principal and Minor Arterial, respectively, in the NCDOT Urban Roads Functional Classification System. Motorists heavily use Balfour Drive at arrival and dismissal times. Many students are dropped off or picked up on Balfour Drive in front of Trindale Elementary School, or at one of the two school driveways.

Balfour Drive

Issues

- School is accessed only from Balfour Road, and there are no sidewalk or crosswalks are present to accommodate students walking to school.
- Despite being surrounded on three sides by residential neighborhoods, pedestrian connections (both on and off road) are absent between the school and these neighborhoods.
- Motorists queue on the road during pick-up hours, reducing visibility for pedestrians walking along the side of the road.
- Motor vehicles travel at perceived high speeds. This can be problematic as cars queuing at the school entrance spillover onto Balfour Road.
- Students crossing N. Main Street to access the school from the east do not have pedestrian crossing infrastructure, and may not be visible to motorists.

Recommendations

- Install sidewalks on the north side of Balfour Drive between Archdale Road and N. Main Street. The proposed sidewalks that the team gave a “high” priority ranking are located on Balfour Drive between Archdale Road and the south end of Brookhollow Lane. The sidewalks on Balfour Drive between the south end of Brookhoold Lane and N. Main Street were given a “medium” priority ranking by the team.
- Install high visibility crosswalks across the sound end of Brookhollow Lane at intersection with Balfour Drive.
- Install pedestrian countdown signals and high visibility crosswalks at all four legs of the intersection of N. Main Street and Balfour Drive.
- Stripe high visibility crosswalks at all four legs of the intersection of N. Main Street and Balfour Drive and move the stop bars behind the curb ramps.
- Retrofit curb ramps at the intersection of N. Main Street and Balfour Drive where they do not meet ADA design standards.

Corridor TE2 Greenway Connection

Engineering Detail

Overview

The proposed greenway connections would benefit students living in the neighborhoods north of the school by providing a shortcut and that would avoid the commuter traffic on Balfour Road via formal connections between the neighborhood roads and William A. “Bill” Aldridge Ball Park. A greenway connection is proposed as part of the Pedestrian Network Plan, 2009.

Figure 27: William A. "Bill" Aldridge Ball Park

Off-road Greenway Connection (from School Property)

Issues

- While the park touches the northern boundary of the school property, it is not conducive to pedestrian travel. Fences boarding both properties have openings that are locked during school travel times. The existing grade is also not ADA compliant.

Recommendations

- Construct a greenway trail to connect the school property to the proposed greenway (part of Archdale’s *Pedestrian Network Plan*, 2009) trail that connects Beard Avenue, and William A. “Bill” Ball Park.
- Construct greenway trails to connect William A. “Bill” Ball Park to Carroll Street and Frazier Street (not part of Archdale’s Pedestrian Network Plan, 2009). Easements may be needed to connect these streets to the proposed greenway from the Pedestrian Network Plan, 2009.
- Trim vegetation located along pedestrian pathways between the two sites.
- Gates for the chain link fence on the school property will need to be opened for students to access the school from the park.

Corridor TE3	Trindale School Drive (School Entrance)	Engineering Detail

Overview

Trindale School Drive is a loop road serveing as Trindale Elemetnary School's main driveway entrance and can only be accessed via Balfour Drive. The road is two-vehicles lanes wide, but functions as a one-way road. There is no speed limit posted.

School Driveway

Issues

- The desired entrance for pedestrians is along the school driveway as this path of travel does not require pedestrians to cross the school parking lot.
- There are no sidewalks to connect the main entrance of the school to Balfour Drive. Students walking to school must walk along the gravel shoulder, where motor vehicles are often queuing for drop-off and pick-up.

Recommendations

- Install a sidewalk on the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Balfour Drive (see Corridor TE1).
-

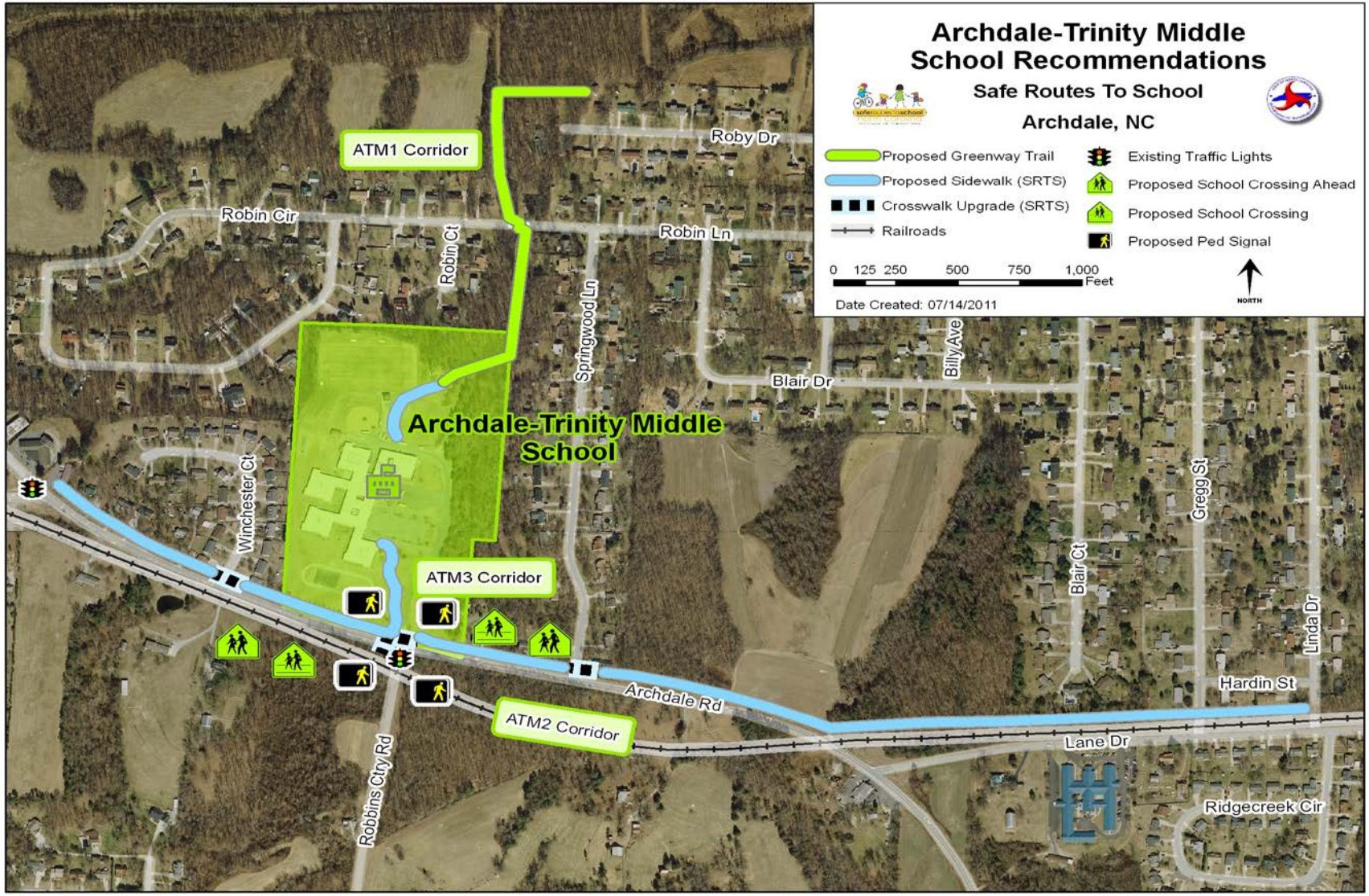
Figure 28: Trindale School Drive (Trindale School Main Entrance) at Balfour Drive.

4.2.05 Location-Specific Engineering Recommendations

4.2.05.01 Detail for Archdale-Trinity Middle School

This section provides additional detail on the engineering recommendations outlined in **Table 15**: Summary of Location Specific Engineering Recommendations for Archdale-Trinity Middle School. **Figure 29** shows where the recommendation sites for each school are located. Each corridor is more fully described with photographs, issues and recommendations. Some corridors have multiple sites.

Figure 29: Archdale-Trinity Middle School Location-Specific Recommendations Detail Overview Map



Overview

A proposed greenway trail leading to Creekside Park is located off of Roby Lane. Extending this connection to the school would not only connect more communities to Creekside Park, it would also connect students to the school using a more direct route.

Greenway Trail

Issues

- Residential neighborhoods surround the school on three sides, but there is no formal pathway that connects the school to these neighborhoods, resulting in longer walking distances.
- There is no sidewalk on the school grounds that would allow children to access surrounding neighborhoods.
- All residential neighborhoods around the school have connection to Archdale Road. While Archdale Road is the most direct route for students to get to the school, it lacks sidewalks for pedestrians.

Recommendations

- Construct the proposed greenway trail to connect the school property to the existing trail connection, north of Roby Drive.

Figure 30: Existing entrance to the rear of the school property.

Overview

The only access to Archdale-Trinity Middle School is from Archdale Road, a busy road categorized as Minor Arterial in the NCDOT Urban Functional Classification System. The road does not have any sidewalks or bicycle lanes. The school entrance is at the signalized intersection with Robins Country Road. Less than 1% of the students walk or bike to classes, which may be attributed to the lack of appropriate infrastructure.

Figure 31: Archdale Road looking eastbound.

Archdale Road

Issues

- Archdale Road lacks sidewalks.
- Archdale Road has School pavement markings for eastbound traffic, but none for westbound traffic.
- More students live to the west of the school than the east.
- Railroad tracks run along the south side of Archdale Road, crossing Archdale Road near Lane Drive.

Recommendations

- Install sidewalks on the north side of Archdale Road between Trinity Road and the railroad tracks to connect the neighborhoods west of Spingwood Lane. Form a continuous pathway by installing sidewalks on the north side of Lane Drive, north of the railroad tracks. Keeping the sidewalk north of the railroad tracks will ensure that students walking eastbound form Hardin Street, will not have to cross the railroad tracks. Existing right of way may be need to be evaluated to build the sidewalks.
- Install “School” Pavement markings on Archdale Road for westward moving traffic.
- Reduce speed limit to 35 mph and further to 25 mph within the school zone.

Intersection of Archdale Road and School Driveway Entrance

Issues

- Some student were observed crossing Archdale Road at the intersection in front of school while motorists were turning into and out of the school driveway. This creates a potential for conflicts between motorists and pedestrians.
- School pavement markings are present for eastbound traffic, but not for westbound traffic.

Recommendations

- Stripe a high visibility crosswalk across Archdale Road on the western leg of the intersection.
- Install pedestrian signals with coutdowns at all legs of the intersection.
- Stripe a high visibility crosswalk across the school entrance driveway.
- Install school crossing signage at all marked crosswalks.

Figure 32: Intersection of Archdale Road and the school driveway, looking south at Robins County Road.

Overview
Students walking to school have no way to connect Archdale Road and the school property other than along the driveway. Students reaching the school property from Winchester Court walk along Archdale Road.

School Access Road

Issues

- There is no sidewalk on school grounds that would allow students to access surrounding neighborhoods.

Recommendations

- Install a sidewalk on the west side of the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Archdale Road.

Figure 33: School driveway and access road.

School Grounds

Issues

- A greenway connection would increase the likelihood of bicycle access to school, creating demand for bicycle parking facilities at the school.

Recommendations

- Install inverted-Ubike racks on the school property, preferably in the school plaza under the canopy.

4.3 Cost Estimates for Infrastructure Recommendations

Table 16 provides estimated unit cost for construction related items that could potentially be required when implementing the engineering recommendations identified previously in **Chapter 4**.[25]

Table 16: Estimated Unit Cost for Construction Related Items

Item	Unit cost*
4-inch Deep Concrete Sidewalk	$3 per square foot
30-inch Concrete Curb and Gutter	$13 per linear foot
Handicap Curb Ramps	$5 per square foot
Raised Concrete Median	$40 per square yard
6-inch High Visibility Thermoplastic Pavement Markings	$0.90 per linear foot
6-foot High Mounted Road/Warning/Information Sign	$150 per each
Pedestrian Signal w/Pedestal	$2,000 per each
Rapid Flashing Beacons (RRFB)	$15,000 per each
30-foot High Standard Street Light	$3,000 per each
Chain Link Safety Fencing	$15 per linear foot
Inverted "U" Shaped Bike Racks	$200 per each EA
12-foot Wide Paved "Greenway" Type Trail	$85 per linear foot
Wooden Pedestrian Foot Bridge	$700 per linear foot
Asphalt Round-About**	$250,000 - $600,000 per each
Standard 4 Way Intersection Traffic Study	$15,000 per each

*Unit cost information is provided primarily from 2010 average construction cost data by NCDOT. Data is intended to be used for determining general estimates of probable construction cost for the items noted. Actual cost will vary depending on current market conditions, final detailed specifications of noted items, final quantities to be installed and other potential variables.

**Cost of a round-about will vary significantly depending on many variables, including the depth of section, width of travel lanes, diameter of round-about, finishing features, etc.

[25] Infrastructure costs were based on data obtained from NCDOT: Project Letting. Available at: http://www.ncdot.org/doh/preconstruct/ps/contracts/letting.html#. Accessed June 2011. And, average historical construction cost (2011 pricing) associated with infrastructure projects designed by ARCADIS.

CHAPTER 5: IMPLEMENTATION AND SUSTAINABILITY

Sustainable SRTS programs are more likely to produce desired goals and objectives. The infrastructure projects identified in the sections that follow may take several years to implement. Education, Encouragement, Enforcement, and Evaluation strategies must often be implemented continuously in order to be effective, as it may take some time for key messages to resonate within school and community populations that are in a constant state of flux. This is why creating a sustainable structure for an SRTS program is so important.

Table 17: Current and Potential Partners

Current and Potential Partners

At the schools:

- Parents
- Principals
- PTA members
- Teachers
- School Nurses

In the community:

- Bicycle riding groups

At the city level:

- Mayor
- City Manager
- City Council
- Fire Department
- Planning and Zoning Department
- Police Department
- Public Works Department
- Parks and Recreation Department

At the county level:

- Randolph County Schools
- Randolph County Safe Kids Coalition
- Randolph County Department of Public Health
- High Point MPO
- Piedmont Triad COG
- Communities in Schools
- Randolph Hospital

5.1 Key Strategies for Creating a Sustainable SRTS Program

Obtain formal City Council approval for this plan. The City Council's backing will be critical for implementing many of the recommendations in the sections below, particularly those that address pedestrian and bicycle infrastructure.

Adopt the SRTS Action Plan as an Appendix to the Pedestrian Network Plan. As such, the plan should be linked and cross-referenced to ensure project priorities can be appropriately leveraged.

Establish a committee to oversee the implementation of the SRTS Action Plan and the Pedestrian Network Plan. This committee should be comprised of members appointed by both the City of Archdale and the Randolph County School District. The committee's primary responsibilities should include providing information to those living and working in Archdale about the benefits of walking and bicycling, and to help negotiate among competing project and program priorities.

Identify funding sources for high priority projects and programs. Review high priority projects against opportunities to incorporate them within already planned projects that exist from several sources such as the City's operating budget, the five year capital budget and development/re-development projects. Additional information on potential funding strategies is included in **Section 5.2** of this chapter and in **Appendix C**. Regularly scan funding programs detailed in **Appendix C** and new programs to determine if SRTS projects can be submitted for funding, especially if they are connected to a complementary need such as a transit stop improvement.

Identify stakeholders. Determine which stakeholders should be informed and involved in SRTS planning and implementation going forward.

Maintain and expand the citywide SRTS Team. The City of Archdale has an established SRTS Team with representatives from the four schools, the City of Archdale, the Randolph County School District, and others. It is important to maintain this group. Consideration should also be given to recruiting new members.

Identify SRTS coordinators or SRTS teams at each school. A committee within each school PTA may be the best option for coordinating school-specific SRTS implementation.

Identify a person or people to coordinate implementation of each of the strategies. Identifying a lead coordinator for each strategy is important to building and maintaining momentum for implementation.

Establish a calendar. Create an annual calendar of SRTS activities for the community and each participating school. Determine how frequently and where groups involved in SRTS planning and implementation will meet. Include a timeline for evaluations, which should occur at least annually.

Maintain existing partnerships and cultivate new ones. A list of existing and potential partners is provided in **Table 17**.

Monitor and Evaluate. Establish measurable goals and conduct regular reviews to determine progress toward meeting them. The goals should be coordinated and cross-referenced with the Randolph County School District Wellness Policy and the Archdale Pedestrian Network Plan. The goals should also reflect goals and objectives from SRTS-supportive programs such as those provided by the SafeKids Coalition-Randolph County Chapter.

5.2 Funding Strategies for SRTS Projects and Programs

Many actions, such as facility construction, will require funding to implement. Other actions, such as improved interagency coordination, are more procedural in nature and will subsequently have minimal fiscal impact. This plan identifies potential sources, such as NCDOT funding programs, the city budget and municipal bonds. Developer contributions through a Pedestrian Benefit Zone or “fee-in-lieu” program or improvements during construction are also possible funding sources.

Where City funds are used, public outreach participants indicated a preference for hotel taxes or municipal bonds. Hotel taxes are typically born by visitors and generally do not directly impact Archdale residents. Municipal bonds are approved by voters through the referendum process, and there are precedents in the city for this funding strategy. An exhaustive list of funding sources for pedestrian and bicycle projects may be found in the **Appendix C**.

5.3 Implementation Plan

This plan includes many recommendations for city-wide and school-specific programs and activities to help start and sustain SRTS in Archdale. Establishing an implementation plan for these recommendations is the first step; the table below serves as a implementation plan for these recommendations. The implementation plan is organized by type: sustainability, engineering, encouragement, education, enforcement and evaluation. Recommendations are color-coded for the City and schools, and are assigned a timeframe to complete (unless otherwise noted, all programs and activities are considered to be on-going once start-up is completed. **Table 18** is the key for color-coding recommendations in **Table 19,** which is the implementation plan.

Table 18: Color-Coding key for Albemarle SRTS Implementation Plan.

	City-wide Sustainability Strategies
	City-wide Engineering Strategies
	City-wide Encouragement, Education, Enforcement and Evaluation Programs
	School-level Encouragement, Education, Enforcement and Evaluation Programs

Table 19: Implementation Plan for SRTS in Archdale

	Within 6 months	Within 12 months	Within 18 months	Within 24 months	Within 36 months	Within 48 months	Within 60 months
Sustainability Strategies							
City Council approval (one time)							
Adopt as part of Pedestrian Network Plan							
Establish a committee to oversee plans							
Identify funding sources for high priority projects and programs							
Identify stakeholders							
Maintain and expand the citywide SRTS Team							
Identify SRTS coordinators / teams at each school							
Identify a person/s to coordinate implementation of each of the strategies							
Establish an annual calendar							
Maintain existing partnerships and cultivate new ones (constant)							
Monitor and Evaluate(constant)							
Engineering							
Install pedestrian signals with the countdown feature along identified or anticipated walking routes.							
Update all school zone signs and pavement markings with 2009 MUTCD standards.							
Develop a design manual to implement complete streets elements needed to increase pedestrian safety within 3 blocks of schools.							
Use the existing sidewalk inventory as an asset management tool to ensure sidewalks remain in good repair and free of vegetation that restricts use (and ADA-compliance) as well as identify sidewalk gaps and crosswalk locations.							
Prioritize sidewalk construction, maintenance, and clearing on routes used by students traveling to the four schools or to a school bus stop location.							
Look for opportunities to coordinate roadway improvement projects and Pedestrian Network Plan projects with the recommendations in this SRTS Action Plan.							

	Within 6 months	Within 12 months	Within 18 months	Within 24 months	Within 36 months	Within 48 months	Within 60 months
Encouragement							
Coordinate Walk to School Day Events at each school							
Coordinate "Walk on Wednesday" each week or once a month							
Establish Park and Walk lots							
Establish and coordinate walking school buses							
City-wide spring bicycle rodeo							
Include safety messages in other student communications							
Participate in Walk to School Day							
Establish walking school buses							
Start a walking program "Volksmarch"							
Education							
Personal Safety Programs							
Pedestrian and bicyclist safety education for students							
Informational meeting for parents and community members							
Pedestrian and bicyclist safety education for parents							
Pedestrian safety education tied in with Halloween Safety education							
Enforcement							
Targeted police enforcement during arrival and dismissal							
Continue crossing guard deployment							
Enforcement of school pick-up and drop-off protocol							
Drive Safe Campaign							
Evaluation							
Conduct Parent Surveys and Student Tallies each spring							
Conduct Pedestrian and Bicycle Counts every other year							

APPENDIX A: SCHOOL PROFILES

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School Profile: Archdale Elementary School

Address: 207 Trindale Rd, Archdale, NC

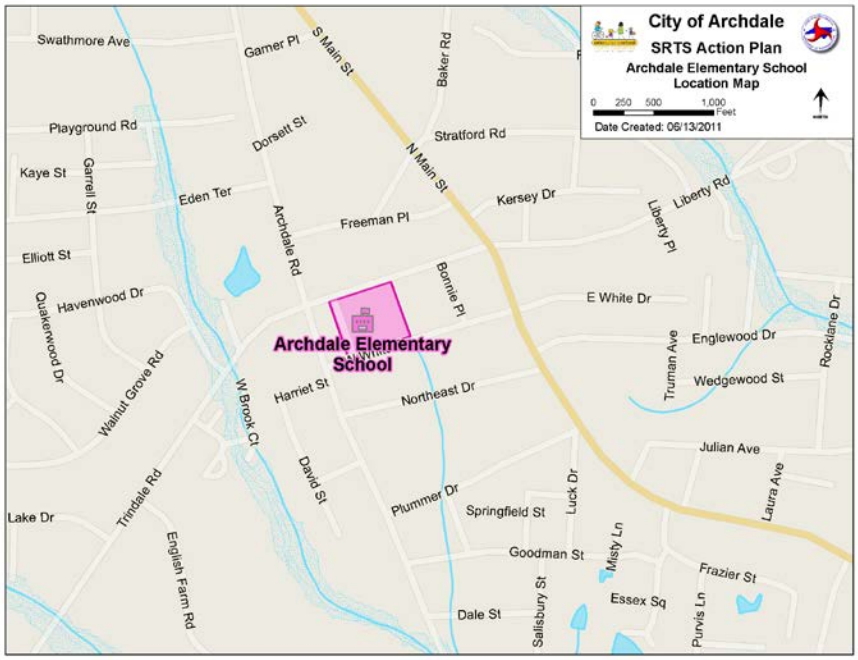
Student Body: 414 students[26]

Grades: PreK-5

Percentage of Students Living With One Mile of School: 58.5%[27]

Active Parent and Safe Routes to School Organizations: Archdale Elementary School PTO

Figure 34: Archdale Elementary School Overview Map



Overview

Archdale Elementary School is is located on the corner of Trindale Road and Hillcrest Lane in a mixed-use area of residential and commercial properties. Trindale Road, which borders the school on its north side, is categorized as Minor Arterial in the NCDOT Urban Functional Classification System. The school serves approximately 430 students grades K-5; about 90% of these students live within a two mile radius of the school. Streets on two sides of school are busy thoroughfares lacking fully connected sidewalks and other pedestrian facilities. Most students ride the bus or are driven by parents. Posted speed limits on Trindale Road, Archdale Road and W. White Drive are 25 mph.

[26] Data provided by Randolph County Schools for the 2009-2010 school year.

[27] Percentage calculated as the portion of student who live within a one-mile radius from the school site.

Student Travel Modes

Field observations and conversations with stakeholders during action plan development meetings suggest that few children walk or bicycle to Archdale Elementary School. The Principal noted that approximately four students living on W. White Drive walk to school regularly.

Busing

Busing is available to all students, regardless of their proximity to school.

Arrival and Dismissal

Arrival and dismissal procedures are included in the school handbook. Arrival and dismissal procedures are detailed in **Table 20** and **Table 21**. Observations made during the course of developing this plan are also included.

- **Table 20: Archdale Elementary School Arrival Procedures**

Schedule	**7:55 AM: First bell.** **8:05 AM: Classes begin.**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	No observations made.	Buses drop off in front of the school using Hillcrest Lane.	No observations made.

Table 21: Archdale Elementary School Dismissal Procedures

Schedule	**2:30 PM: Bus riders and day care students dismissed.** **2:40PM: Car riders are dismissed.**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures **Observations on 11/18/09**	No students were observed walking or bicycling home.	Buses start lining up on Hillcrest Lane at 2:30PM.	Parents can queue in motor vehicles along W. White Drive, but cannot access Hillcrest Lane until all of the buses have loaded and passed through.
	No children were observed walking from school. No kids bike to school and there are no bicycle racks on the school grounds. There were no crossing guards observed.	No observations made.	Long queue of motor vehicles formed along W. White Dr, almost reaching the intersection with Bonnie Place. Few motorists used the road as a cut-through, but the ones that did drove slowly, possibly aware of the school presence and the parked cars along the street. Sometimes motorists come from the wrong side on the one-way Hillcrest Lane despite posted signs indicating the correct direction. The same drivers travel past buses loading

			students. Some parents were observed parking in the Archdale Friends Meeting House parking lot and walking down to Trindale Road to pick up their children.

Survey Results

Archdale Elementary School Elementary used survey instruments provided by the National Center for Safe Routes to School to establish baseline information on student travel behavior and perceived barriers to walking and bicycling to school. Archdale Elementary School administered the Student Tally Form in winter 2010 and the Parent Survey Form in spring 2010.

Of the 428 Parent Surveys distributed in spring 2010, 184 (42%) were collected and tabulated. Below are some highlights from the 2010 Parent Survey results.

Complete summaries of the parent survey response and student tallies are included in **Appendix E**.

Travel Modes

Most students travel to Archdale Elementary School by family vehicle. However, a substantial percentage of the student body arrives by bus and carpool. **Table 22** details student travel modes reported in the Parent Survey.

Table 22: Number and Percentage of Children by Travel Mode to School

Travel Mode	Count	Percentage of Respondents (%)
Family Vehicle	120	66
School Bus	53	29
Carpool	20	9
Walk	7	4
Other	1	1
Bicycle	0	0
Transit	0	0

Walking and Bicycling Potential

Approximately 34% of survey respondents reported living within one mile of Archdale Elementary School, a distance that is considered within a comfortable range for walking and bicycling. Of the respondents who reported living within one mile of the school, seven said their children walked or bicycled to school, suggesting that there is potential for increasing walking and bicycling rates at Archdale Elementary School.

Improvements Likely to Have the Greatest Impact on Walking and Bicycling Rates

The results of the Parent Survey suggest that improvements in several key areas might substantially increase the number of children who walk and bicycle to school. Issues that may affect a parent's decision to allow their child to walk or bike to school are detailed in **Table 23**.

Table 23: Affect on Parental Decisions Not to Allow Student Walking and Bicycling if Certain Problems Were Improved

Issue	Change would affect decision	Change may affect decision
Distance	25%	10%
Sidewalks/ or pathways	23%	9%
Traffic speed along route to school	26%	9%
Traffic volume along route	26%	9%
Weather or climate	21%	8%
Violence or Crime	20%	8%
Safety of intersections & crossings	27%	10%
Time	10%	9%

Benefits of Walking and Bicycling

Approximately 23% of surveyed Archdale Elementary School parents said they considered walking and bicycling to school "very healthy" for their child, and 16% considered it "very fun" or "fun." Finally, 82%of parents said they felt Archdale Elementary School neither encourages nor discourages walking and bicycling to school. These results suggest that while Archdale Elementary School parents appear to be well-informed about the benefits of walking and bicycling to school, they do not feel that the school actively encourages it.

Education and Adult Supervision

Over three-fourths of Archdale Elementary School parents indicated that they would "not feel comfortable" allowing their child to walk or bicycle to school at any grade without parental supervision. Of those parents who said they would allow a child to walk or bicycle to school without parental supervision at some point from grades K-8, 68% chose grade 5, 6, 7, or 8. This suggests two things. First, there may be a heightened need for pedestrian and bicycle safety education during grades 5-8. Second, ensuring parental supervision along student walking or bicycling routes is important to many parents. Therefore, implementing strategies designed to provide this supervision, such as walking school buses and bicycle trains, might be an effective way to increase walking and bicycling rates.

School Profile: John Lawrence Elementary School

Address: 310 Eagle Road, Archdale, NC

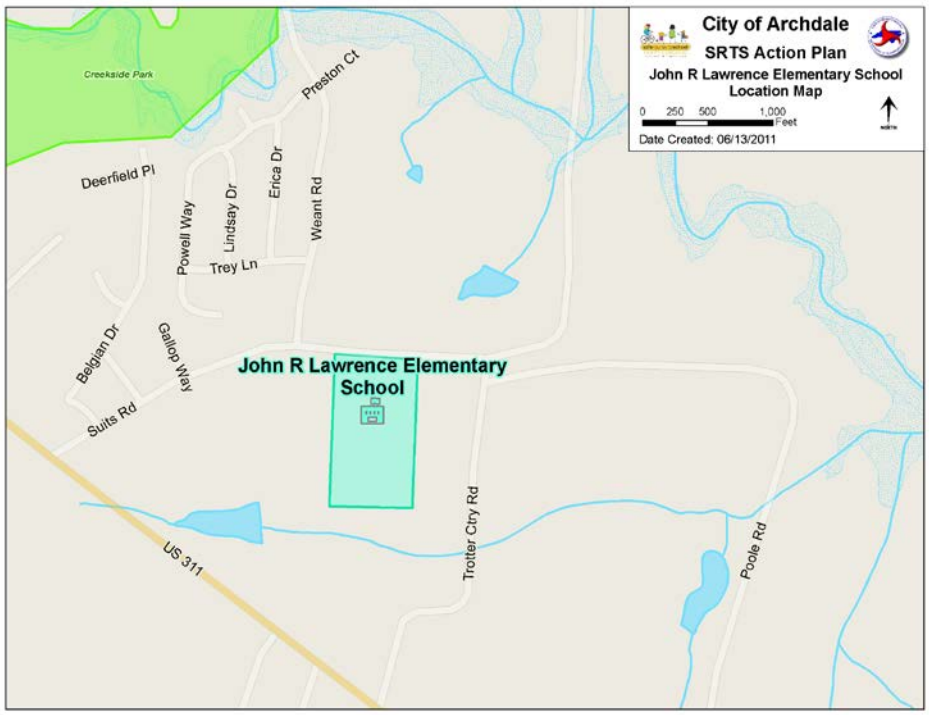
Student Body: 531[28]

Grades: K-5

Percentage of Students Living With One Mile of School: 23.7%[29]

Active Parent and Safe Routes to School Organizations: John Lawrence Elementary School Elementary Parent Teacher Organization

Figure 35: John Lawrence Elementary School Overview Map



Overview

John Lawrence Elementary School is located in a predominantly rural area of the City of Archdale on Suits Road, a two-lane country road with a posted speed limit of 45 mph. Approximately 550 student grades K-5 attend the school. More than 40% of the children attending the school live within two miles of John Lawrence Elementary School. Some students live in the neighborhood across from the school grounds, but almost none of them walk or bike to and from school due to the lack of sidewalks or pedestrian crossings.

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[28] Data provided by Randolph County Schools for the 2009-2010 school year.

[29] Percentage calculated as the portion of student who live within a one-mile radius from the school site.

Student Travel Modes

Walking and Bicycling

Approximately 28% of survey respondents reported living within one mile of John Lawrence Elementary School, a distance that is considered within a comfortable range for walking and bicycling.

Busing

Busing is available to all students, regardless of their proximity to school.

Arrival and Dismissal

Arrival and dismissal procedures are included in the school handbook. The school reminds parents of procedures and informs them of changes through open and automated phone messages. Arrival and dismissal procedures are detailed in **Table 24** and **Table 25**. Observations made during the course of developing this plan are also included.

Table 24: John Lawrence Elementary School Arrival Procedures

Schedule	**School day begins at 7:20 AM** **Breakfast is served from 7:20 - 7:50 AM.** **Tardy bell rings at 7:50 AM**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	No procedure for this group.	Information not provided.	Information not provided

Table 25: John Lawrence Elementary School Dismissal Procedures

Schedule	**2:30 PM: Students who travel by bus and car are dismissed.** **2:40 PM: Students who walk or bike are dismissed.**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures **Observations on 01/12/10**	No procedure for this group.	Buses line up at the school side entrance. Bus riders were taken by a teacher to a different parking lot with separate entrance from the main lot.	Parents form a line up to the front entrance of the building to retrieve their children.
	No students were observed walking or biking from school.	It appears that since the buses are separated from the private vehicles, the process moves smoothly.	The queue line in the front of the school began a little after 2:00 PM and eventually backed up onto Suits Road as loading begins. The entire process took approximately a half-hour. Most parents appeared to obey the speed limit and procedures. However the principal mentioned that commuters (parents picking

			up their children and other drivers) seem to travel at relatively higher speeds.

Survey Results

John Lawrence Elementary School Elementary used survey instruments provided by the National Center for Safe Routes to School to establish baseline information on student travel behavior and perceived barriers to walking and bicycling to school. John Lawrence Elementary School administered the Student Tally Form and the Parent Survey Form in spring 2010.

Of the 550 Parent Surveys distributed in the spring of 2010, 178 (33%) were collected and tabulated. Below are some highlights from the 2010 Parent Survey results.

Complete summaries of the parent survey response and student tallies are included in **Appendix E**.

Travel Modes

Most students travel to John Lawrence Elementary School Elementary by family vehicle. However, a substantial percentage of the student body arrives by bus and carpool. **Table 26** details student travel modes reported in the Parent Survey.

Table 26: Number and Percentage of Children by Travel Mode to School

Travel Mode	Count	Percentage of Respondents (%)
Family Vehicle	135	76
School Bus	35	20
Carpool	7	4
Walk	0	0
Bicycle	0	0
Transit	0	0
Other	0	0

Walking and Bicycling Potential

Approximately 24% of survey respondents reported living within one mile of John Lawrence Elementary School, a distance that is considered within a comfortable range for walking and bicycling. Of the respondents who reported living within one mile of the school, none said their children walked or bicycled to school, suggesting that there is potential for increasing walking and bicycling rates at John Lawrence Elementary School.

Improvements Likely to Have the Greatest Impact on Walking and Bicycling Rates

The results of the Parent Survey suggest that improvements in several key areas might substantially increase the number of children who walk and bicycle to school. Issues that may affect a parent's decision to allow their child to walk or bike to school are detailed in **Table 27**.

Table 27: Affect on Parental Decisions Not to Allow Student Walking and Bicycling if Certain Problems Were Improved

Issue	Change would affect decision	Change may affect decision
Traffic speed along route to school	81%	Question no longer asked on latest version of survey.
Traffic volume along route	80%	
Distance	72%	
Violence or Crime	65%	
Safety of intersections & crossings	59%	
Sidewalks/ or pathways	47%	
Weather or climate	47%	
Time	35%	
Adults to walk/ bike with	26%	
Crossing Guards	21%	
Convenience of driving	20%	
Before/ after-school activities	16%	

Benefits of Walking and Bicycling

Approximately 32% of John Lawrence Elementary School parents said they considered walking and bicycling to school "very healthy" for their child, and 21% considered it "very fun" or "fun." Finally, only 7% of parents said they felt John Lawrence Elementary School "strongly encouraged" or "encouraged" walking and bicycling to school. These results suggest that while John Lawrence Elementary School parents are well informed about the benefits of walking and bicycling to school they do not feel encouraged by the school to have their children to walk and bicycle.

Education and Adult Supervision

No information regarding what grade parents would allow their children to walk or bicycle to school was obtained. This question was removed in the updated version of the survey.

School Profile: Trindale Elementary School

Address: 400 Balfour Drive, Archdale, NC

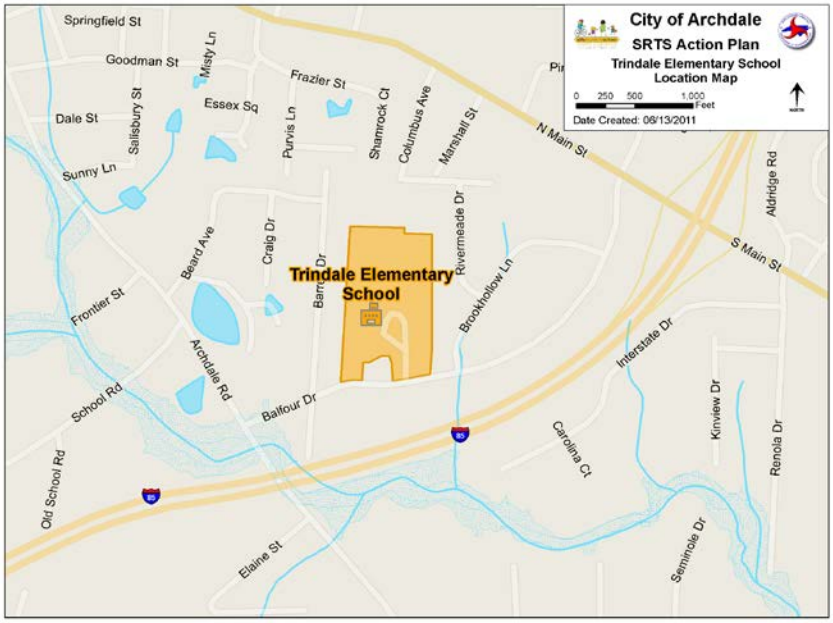
Student Body: 363 students[30]

Grades: PreK-5

Percentage of Students Living With One Mile of School: 24.5%[31]

Active Parent and Safe Routes to School Organizations: Parent-Teacher-Student-Association (P.T.S.A.), Safety Patrol, Trindale Troopers, Student Council

Figure 35 Trindale Elementary School Overview Map



Overview

Trindale Elementary School is located on Trindale School Drive, directly off of Balfour Drive. The school site is between two major arterials: Archdale Road to the west and Main Street (Rt 311) to the east. The school site is surrounded by single family neighborhoods. To the north of the school is a public baseball field. The perimeter of the site is established by a chain link fence surrounding the school property. Students cannot easily walk or bicycle to the school. The chain link fence prohibits access to the school from the surrounding neighborhoods. The lack of sidewalks on either side of Balfour Drive and along streets in the surrounding neighborhoods make it difficult for students to walk or bike to the school. Balfour Drive is a common route for commuters as it gives access to Archdale Road and Main Street. Both traffic volume and traffic speed issues have been noted by the team and by parents. It is possible that the combination of high traffic volumes and speeds, coupled with a lack of separate and/or buffered pedestrian and bicycle infrastructure is deterring families from encouraging their children to walk or bike to school. No crash data have been recorded within one mile of the school.

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[30] Data provided by Randolph County Schools for the 2009-2010 school year.

[31] Percentage calculated as the portion of student who live within a one-mile radius from the school site.

Student Travel Modes

According to team members and the student travel tallies, all students travel to and from school by motor vehicle. Many students ride buses, and several students are driven by family members. None of the students ride bikes or walk to school.

Busing

Busing is available to all students, regardless of their proximity to school.

Arrival and Dismissal

The school informs parents about arrival and dismissal procedures through the student handbook and newsletters. Arrival and dismissal procedures are detailed in the following tables. Observations made during the course of developing this plan are also included.

Table 28:Trindale Elementary School Arrival Procedures

Schedule	**7:30am: Doors open and buses unload** **7:30am-7:55am: Breakfast served in cafeteria** **8:00am: First class begins**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	No procedure for this group.	Buses enter the school grounds via the school's main access on Trindale School Drive. Students are dropped off at the main entrance to the school building.	Parents are not allowed to access Trindale School Drive after 7:25am, when the buses arrive. Many parents used the staff parking lot accessible via Balfour Drive to drop off their children. Using the staff parking lot as a drop-off zone is not the preferred procedure of the school administrators.
Observations	No observations made		

Table 2916: Trindale Elementary School Dismissal Procedures

Schedule	**2:20 pm: All students are released** **2:30pm: If all buses are loaded, they are released**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	No procedure for this group.	Student safety patrols help students line up for the school buses that queue along Trindale School Drive.	Parents are not permitted onto Trindale School Drive until the buses have left.

Observations on 11/17/09	No students were observed walking or biking from school.	Team members noted that sometimes a police officer will direct traffic, to make it easy and safe for buses to access Balfour Drive.	Parents were observed queuing on Balfour Drive, waiting to access Trindale School Drive. Parents arriving by motor vehicle also use the staff parking lot to access the schools. In the staff parking lot there is no established protocol. Some parents drive up to the side entrance of the school and others park wherever there is space and walk to pick up their children.

Survey Results:

Trindale Elementary School used the Parent Survey provided by the National Center for Safe Routes to School to establish baseline information on student travel behavior and perceived barriers to walking and bicycling to school. Trindale Elementary School administered the Parent Survey Form and the Student Travel Talley in the spring of 2010. Of the 390 surveys distributed, 144 (36%) were collected and tabulated. **Table 30** and **Table 31** show highlights from the 2010 Parent Survey results.

Complete summaries of the parent survey response and student tallies are included in **Appendix E**.

Travel Modes

Most students travel to Trindale Elementary School by family vehicle. However, substantial percentages arrive by bus. None of the students walk or bicycle to school.

Table 30: Number and Percentage of Children by Travel Mode to School

Travel Mode	Count	Percentage of Respondents (%)
Family Vehicle	101	72
School Bus	29	21
Carpool	11	7
Walk	0	0
Bicycle	0	0

Walking and Bicycling Potential

Approximately 25% of survey respondents reported living within one mile of school, a distance considered comfortable for walking and bicycling. Of the respondents who live within one mile of the school, none said their children walked or bicycled to school, suggesting that there is substantial potential for increasing walking and bicycling rates at Trindale Elementary School.

Improvements Likely to Have the Greatest Impact on Walking and Bicycling Rates

The results of the Parent Survey suggest that improvements in several key areas might substantially increase the number of children who walk and bicycle to school. Issues that may affect a parent's decision to allow their child to walk or bike to school are detailed in **Table 31**.

Table 31: Affect on Parental Decisions Not to Allow Student Walking and Bicycling if Certain Problems Were Improved

Issue	Change would affect decision	Change may affect decision
Traffic speed along route to school	6%	13%
Traffic volume along route	7%	10%
Distance	7%	12%
Safety of intersections and crossings	8%	7%
Violence or crime	5%	11%
Weather or climate	5%	8%
Sidewalks or pathways	11%	8%

Benefits of Walking and Bicycling

About 40% of Trindale Elementary School parents said they considered walking and bicycling to school "very healthy" for their child, and 23% considered it "very fun" or "fun." Over 80% of parents said they felt Trindale Elementary School neither encourages nor discourages walking and bicycling to school. These results suggest that while some Trindale Elementary School parents appear to be well-informed about the benefits of walking and bicycling to school, but they do not feel that the school actively encourages it.

Education and Adult Supervision

Approximately 80% of Trindale Elementary School parents indicated that they would "not feel comfortable" allowing their child to walk or bicycle to school at any grade without parental supervision. Of those parents who reported they would allow a child to walk or bicycle to school without parental supervision at some point from grades K-8, 95% chose grade, 6, 7, or 8 as the grade when they would first allow their child to walk or bicycle to school. This suggests there may be a heightened need for pedestrian and bicycle safety education during grades 6-8. It is possible that parents may not be comfortable with their children walking or biking to Trindale Elementary School, but they may one day feel comfortable allowing their children walking or biking to Archdale-Trinity Middle School, another school participating in Archdale's SRTS Action plan.

The open ended comments provided some interesting insights into the parent attitudes towards walking and bicycling. Some were very encouraging, suggesting that at the right age or if walking conditions were improved, they would encourage their children to walk to school. A few said they would allow their child to walk to school if they walked in groups, especially with adult supervision. One parent added that if sidewalks were installed along Balfour Drive, they would bike to work.

School Profile: Archdale-Trinity Middle School

Address: 110 North Central Avenue, Archdale, NC

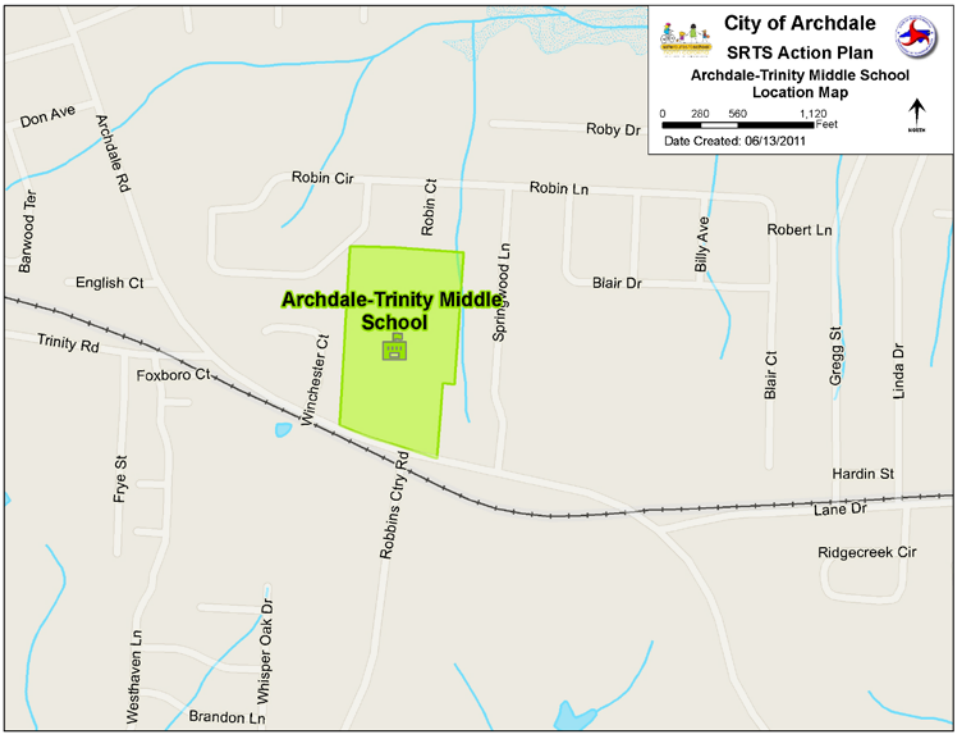
Student Body: 776 students[32]

Grades: 7-8

Percentage of Students Living With One Mile of School: 9.0%[33]

Active Parent and Safe Routes to School Organizations: Archdale Parent Teacher Organization

Figure 36: Archdale Trinity Middle School Overview Map



Overview

Archdale-Trinity Middle School is located in a suburban area on the east side of City of Archdale, surrounded mainly by residential single-family development. Approximately 800 students in grades 7 and 8 attend the school, and about 33% live within two miles of the school. The middle school is located on Archdale Road, a busy road categorized as Minor Arterial in the NCDOT Urban Functional Classification System. The road does not have any sidewalks or bicycle lanes. The school entrance is at the signalized intersection with Robins Country Road. Less than 1% of students walk or bike to school. This can be attributed to the lack of safe and comfortable infrastructure.

[32] Data provided by Randolph County Schools.

[33] Percentage calculated as the portion of student who live within a one-mile radius from the school site.

Student Travel Modes

According to participants in the SRTS action planning process and the Parent Surveys shown in **Table 32** and **Table 33**, most students travel to and from school in a family vehicle. Approximately one in four students rides the bus. Relatively few students (less that 1%) currently walk or bicycle to school.

Busing

Busing is available to all students, regardless of their proximity to school.

Arrival and Dismissal

The school informs parents about arrival and dismissal procedures through the student handbook and handouts sent out with students. Arrival and dismissal procedures are detailed in **Table** and **Table**. Observations made during the course of developing this plan are also included.

Table 32: Archdale-Trinity Elementary School Arrival Procedures

Schedule	**7:15 AM: Students report to gym upon arrival.** **7:30 AM: Students who participate in the breakfast program are directed to the cafeteria.** **7:50 AM: First bell.** **8:00 AM: Classes begin.**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	Some walkers come from the neighborhoods behind the school and walk across the fields at the back of the school property. A teacher is positioned at this location in the morning to ensure that students make direct pathways into school.	Bus riders are dropped off at the front of the school building and at the side parking lot to unload the students as quickly as possible.	Parents dropping off their children must make a continuous line, and must be out of the bus queue by 7:30am.
	A School Resource Officer circulates between the bus loading area and the campus parking lots.		
Observations	Most students arrived between 7:25 AM and 7:45 AM.		

Table 33: Archdale-Trinity Elementary School Dismissal Procedures

Schedule	**2:20 PM: Bus riders are dismissed.** **2:30 Car riders are dismissed.**		
	Pedestrians and Bicyclists	**Bus Riders**	**Car Riders**
Procedures	There is no procedure for dismissing walkers or bikers separately. Walkers and bikers are dismissed with bus riders.	Bus dismissal is staggered. Students are called to the bus waiting area as buses become available for pick-up.	Parents must wait to enter the pick-up line until all of the buses have left the school campus. Parents then form a single line in front of the school entrance. Parents must stay in the cars and are not permitted to park and retrieve their child.

	A School Resource Officer circulates between the bus loading area and the parent pick-up line. The school resource officer helps oversee the parent pick-up line.		
Observations on 11/18/10	No students were observed walking or bicycling home from school.	Bus riders were observed boarding the buses in an efficient manner.	Parents began queuing along the school entrance (leaving a clear path for buses to reach the front of the school) as early as 1:30 p.m. The procedure appeared to move quickly and smoothly.

Survey Results:

Archdale-Trinity Middle School used the Parent Survey provided by the National Center for Safe Routes to School to establish baseline information on student travel behavior and perceived barriers to walking and bicycling to school. Archdale-Trinity Middle School administered the Parent Survey Form in the spring of 2010 and Student Travel Tallies in the winter of 2010. Of the 800 surveys distributed, 65 (8%) were collected and tabulated. **Table 34** and **Table 35** show highlights from the 2010 Parent Survey results.

Complete summaries of the parent survey response and student tallies are included in **Appendix E**.

Travel Modes

Most students travel to Archdale-Trinity Middle School by family vehicle. However, substantial percentages arrive by bus. None of the students arrive by walking or biking.

Table 34: Number and Percentage of Children by Travel Mode to School

Travel Mode	Count	Percentage of Respondents (%)
Family Vehicle	33	52
School Bus	26	41
Carpool	4	6
Walk	0	0
Bicycle	0	0
Transit	0	0
Other	0	0

Walking and Bicycling Potential

Approximately 12.7% of survey respondents reported living within one mile of school, a distance considered comfortable for walking and bicycling. Of the respondents who live within one mile of the school, none of their children walked or bicycled to school, suggesting that there is substantial potential for increasing walking and bicycling rates at Archdale-Trinity Middle School.

Improvements Likely to Have the Greatest Impact on Walking and Bicycling Rates

The results of the Parent Survey suggest that improvements in several key areas might substantially increase the number of children who walk and bicycle to school. Issues that may affect a parent'' decision to allow their child to walk or bike to school are detailed in **Table**.

Table 35: Affect on Parental Decisions Not to Allow Student Walking and Bicycling if Certain Problems Were Improved

Issue	Change would affect decision	Change may affect decision
Distance	27%	10%
Sidewalks/ or pathways	18%	10%
Traffic speed along route to school	16%	10%
Traffic volume along route	15%	7%
Weather or climate	23%	7%
Violence or Crime	18%	7%
Safety of intersections & crossings	9%	3%

Benefits of Walking and Bicycling

About 18% of Archdale-Trinity Middle School parents said they considered walking and bicycling to school "very healthy" for their child, and 10.0% considered it "very fun" or "fun." Only 8% of parents said they felt Archdale-Trinity Middle School "strongly encouraged" or "encouraged" walking and bicycling to school. These results suggest that while some Archdale-Trinity Middle School parents appear to be well-informed about the benefits of walking and bicycling to school, they do not feel that the school actively encourages it.

Education and Adult Supervision

Approximately 72% of Archdale-Trinity Middle School parents indicated that they would "not feel comfortable" allowing their child to walk or bicycle to school at any grade without parental supervision. Of those parents who reported they would allow a child to walk or bicycle to school without parental supervision at some point from grades K-8, all chose grades 5, 6, 7, or 8. This suggests pedestrian and bicycle safety education may be most effective at Archdale-Trinity Middle School, of the schools in this plan, because it serves grades 7-8.

APPENDIX B: MEETING MINUTES

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ARCADIS G&M of NC, Inc.
128 South Tryon Street
Suite 1100
Charlotte, NC 28202
Tel 704 752 4258

MEETING MINUTES

Subject:
SRTS- Archdale Kickoff Meeting

Department:
Transportation

ARCADIS Project No.:
NC608009.0001 0ARCH

Place/Date of Meeting:
November 9, 2009
Archdale-Trinity Middle School

Copies:
Sarah O'Brien

Minutes by:
Ivo Dernev

Issue Date:
January 8, 2009

Participants:
Jason Miller – City of Archdale
Hanna Cockburn – PTCOG
Greg Venable – High Point MPO
Gwen Taylor – Communities in Schools
Lynn Smith – Archdale Elementary Principal
Darrell Gibbs – Archdale Police
DJ Seneres – City of Archdale
Penny Stewart – Randolph County Schools
Terry Burgin – Trindale Elementary Principal
Laura Weil – Randolph Hospital
Shea Cox – Randolph Co. Health Department
Scott Yokeley – Archdale Parks and Recs
Mary Rulli – Archdale Planning and Zoning
Jennifer Britt – NCDOT
Andrea Haynes – Archdale Trinity MS Principal
Cindy Clodfelter – Archdale Trinity MS Phys Ed
Katie Mencarini TDG
RJ Eldridge TDG
Lou Raymond ARCADIS
Tyson Graves ARCADIS
Austin Chamberlain – ARCADIS
Ivo Dernev - ARCADIS

Meeting Purpose:
The purpose of the meeting was to coordinate with the School Team especially each of the four schools, assess the vision and goals identified at the February 2009 SRTS Workshop, identify stakeholders, and begin to identify school data and infrastructure data needs.

Discussion Highlights:

Katie Mencarini from Toole Design Group began the meeting with an emphasis on the SRTS program benefits and implementation methods. She spoke about the program's success in other states and gave brief background info on how the program is funded and where in the process are we now.

Katie spoke about the consultant and stakeholders roles in the process of creating the plan, and reviewed some of the issues discussed in the previous meeting held on February 25, 2009 and updated their status.

<u>Enforcement</u>

- There were no issues with speed limit in the schools vicinity.
- None of the represented schools had a crossing guard. Archdale Trinity Middle and Trindale Elementary use the help of their custodians and sometimes Archdale Elementary's principal Lynn Smith is helping with directing traffic during pick-up and drop-off hours.
- Lynn Smith expressed concern over long queues of vehicles forming on West White Dr (adjacent to Archdale Elementary) street in the morning and afternoon, blocking half of the street, which hinders normal traffic pattern.
- The issue of long vehicles queues on Balfour Dr by Trindale Elementary School was also pointed out by school principal Terry Burgin.
- Archdale Trinity middle school has an assigned SRO (School Resource Officer) who is also present during pick-up and drop-off.

<u>Encouragement</u>

- A Walking School Bus program was discussed, but currently none of the presented schools has one set in place. The reasons for not having one are mostly lack of infrastructure (sidewalks) and busy roads surrounding the schools.
- Programs aimed at encouraging students to walk longer distances by awarding them with points were discussed.
- Hanna Cockburn and Shea Cox had previously organized a bike rodeo for other schools in Randolph County and suggested the possibility of another one for any interested schools.

- Randolph County has a Safe Kids Coalition where anything related to children's safety, walking to school, walking in the dark, bike rodeo's, etc can be incorporated into the Safe Routes to School program.

- "International Walk to School Day" was mentioned as an opportunity to get the schools in the Archdale/Trinity area involved with SRTS.

Education

- Physical Education Teacher Cynthia Clodfelter talked about health promoting walking program that Archdale Trinity Middle school currently has in place.

Engineering

- Archdale Elementary - in order to avoid long wait and parking on the street some parents park at the Quaker Church parking lot on Trindale Rd and walk to the elementary school parking lot. Crosswalk across from the church parking lot was a suggested option.

- Trinity Middle School - some students are already walking to and from some of the neighborhoods surrounding the school. Creating walking paths connecting the school with these neighborhoods via Robin Circle and Robin Court was a discussed possibility.

- Students from the same school cross Archdale Rd at the intersection with Robbins County Rd during pick-up/drop-off when the intersection is busiest. Possible improvements such as pedestrian phase or a crosswalk were suggested.

- Austin Chamberlain with ARCADIS demonstrated web based tool, which enables stakeholders to review a map of the area around the schools and add or edit existing and proposed features related to the SRTS program. The map will enable the design team to better understand travel patterns around schools and suggest improvements.

- School principles agreed that some type of info on where the students are coming from and going to after school would be helpful for the project, but expressed concern that student addresses will not be data that schools can provide.

For the parent surveys and student tallies, we discussed getting them distributed and completed when schools are back in session for 2010.

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Raleigh
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MEETING MINUTES

Subject:
SRTS- Archdale Barriers and Opportunities Meeting

Department:
Transportation

ARCADIS Project No.:
NC608009.0002 0ARCH

Place/Date of Meeting:
March 30, 2010
Archdale Trinity Middle School

Copies:
Sarah O'Brien
Meeting Participants

Minutes by:
Ivo Dernev

Issue Date:
May 13, 2010

Participants:
Shea Cox, Randolph County Health Dept.
Mary Rulli, Archdale Planning & Zoning
Bert L. Stone, Archdale Mayor
Trevor Spencer, NCDOT
Jennifer Britt, NCDOT
Dara Matthews, Communities in Schools
Darrell Gibbs, Archdale Police
Terry Burgin, Trindale Elementary
Sarah O'Brien, NCDOT
Jason Miller, City of Archdale
Zeb Holden, City of Archdale
Andrea Haynes, ATMS
Penny Stewart, School Nurse
Katie Mencarini, TDG
Lou Raymond, ARCADIS
Ivo Dernev, ARCADIS
Austin Chamberlain, ARCADIS

Meeting Purpose:

The purpose of the meeting was to present and discuss the Project Team's infrastructure and non-infrastructure recommendations as related to the five E's – Engineering, Education, Encouragement, Enforcement, and Evaluation to the Archdale School Team. These recommendations address specific barriers currently hindering walking and biking to school in Archdale, highlight opportunities available to the community to improve bicycle and pedestrian environment. The meeting also provided an opportunity to receive feedback from the community about the recommendations and to incorporate their knowledge in the design of the recommendations. The recommendations will ultimately be incorporated into the draft Action Plan for the four Archdale schools.

Discussion Highlights:

The meeting took place in the Archdale Trinity Middle School Library. Lou Raymond welcomed everyone to the meeting with a brief recap of the events of the first meeting and an update on the project's progress. He provided a synopsis of the field work undertaken to verify existing conditions, observe dismissals at each of the schools, and discuss issues with the principals if possible, and explained how this would be integrated into the recommendations. He touched on the purpose of the barriers and opportunities meeting as a forum for discussion and further development of the recommendations, in order to assure that they would be suitable for the community, and receive feedback about contacts, priorities and feasibility. He further explained how the information the design team gathers from this meeting will be incorporated into the draft action plan and presented at the next meeting, tentatively scheduled for June. The introduction concluded with an outline of how the meeting was planned to proceed, after which Katie Mencarini began discussion of the non-infrastructure items ("Other E's").

Katie started the "Other E's" discussion by asking the group to consider what sort of outcome the community would like as a result of the planning process, and how that aligns with the community's stated Vision and Goals. These include visions for improved safety for walkers and bikers, developing healthier lifestyles for students, and a commitment to protecting the natural environment. Katie explained how the vision and goals would serve as the central theme for the development of the plan. General strategies for non-infrastructure programs were discussed and Katie posed a few questions to the group intended to get them thinking about the programs they currently have in place, as well as what types of additional initiatives could be taken across all of the "E's" that may reinforce and further develop their current effort. The results of the group discussions were recorded on large worksheets and are reported bellow based on strategy, coordinator and partners.

Encouragement Strategies:

- Walking school buses/Bicycle Train – partner with the City of Archdale. No lead coordinator was designated to head this effort.
- International Walk to School Day – associated with a PTA meeting and partner with Fire Department and "Safe Kids Randolph County". Designated lead coordinators were the Schools principals and the City of Archdale.
- Annual Bike Rodeo – in coordination with "Spring Fling" and "Bush Hill" festivals when great number of citizens(pedestrians) gather at two locations. Such events can be appropriate venues to collect and distribute bike helmets in addition to teaching kids about safety and way to maintain their bicycles - partner with "Safe Kids Randolph County", PTA, NCDOT, Piedmont Triangle COG, and Cooperative Extension. No lead coordinator was designated.

- Start a walking program with achievement tokens (volksmarch) – partner with PTA and students groups such as Boy/Girl Scouts and SGA. No lead coordinator was designated.

Some of the issues discussed for these strategies were what behaviors should be encouraged, what would be the most effective way to encourage them and how often should this be done. No lead coordinator was designated

Education Strategies:

- Pedestrian safety education incorporated into the standard curriculum – coordinate by the School PE teacher and partner with "Safe Kids Randolph County" and NC Cooperative Extension – leading coordinators could be the PE teachers
- Parent workshop to promote health and fitness – coordinate between Principals and PTA, partnered with NC Cooperative Extension – lead coordinators are school principals and PTAs
- Informational meetings for parents and community members – coordinated with PTA and partnered with Local Police, led by the PTA
- Pedestrian Safety Education tied in with Halloween Safety Education – lead coordinator is ''Safe Kids Randolph County"
- NC Idling Campaign – "Safe Kids Randolph County". No lead coordinator was designated

Key questions for these strategies were; what information needs to be conveyed and to whom, what are the most effective way of conveying it (involving churches is a possibility) and how often does the information need to spread around?

Enforcement Strategies:

- Work with Archdale Police Department to implement targeted enforcement – lead coordinators for this strategy are the school principals partnering with the police department – lead coordinators are the principals.
- Crossing guards (trained and provided with necessary tools such as highly-reflective vests) - lead coordinators for this effort should be the school principals partnering with the police department and parent volunteers - lead coordinators in this effort are the principals.
- Continue to collaborate with School Resource Officers(SROs) to help with pick-up/drop-off and other driver behaviors directly around the school site – SRO. No lead coordinator was designated
- Send home packets with parents regarding zero tolerance for speeding and other traffic violations near schools – Archdale Police Department. No lead coordinator was designated
- Drive Safe Campaigns – PTA, City of Archdale. No lead coordinator was designated

Raised questions included the following:

- What behaviors can be addressed by enforcement?
- How should enforcement efforts be implemented?
- Who should be responsible for enforcement strategies,
- Should good behavior be encouraged and bad behavior be punished?
- What are the best strategies to garner police resources and public support?
- Do the strategies identified relate to visions, goals and objectives?

Evaluation Strategies:

- Parent Surveys and Student Tallies- coordinated by the City of Archdale
- Annual Walk Audit with the school team- coordinated by the City of Archdale.

Further discussions considered the following

- How often these strategies be implemented?
- What isn't captured by student tallies/parent surveys that needs to be measured?
- How to get support from parents, teachers, and administrators?
- Do the strategies identified relate to visions, goals, objectives?

Engineering Recommendations:

Lou Raymond and Ivo Dernev discussed engineering recommendations with the school team by concentrating on the surrounding areas of each of the schools and moving on to the next.

Trindale Elementary School

- The school is located on Balfour Drive and this road provides the only access to school. A challenge here is that there are no sidewalks along the road and cars park on the shoulder during pick-up and drop-off hours.
    - Recommendation: Install sidewalks on north side of Balfour Drive from Archdale Road to the north side of Brookhollow Lane – High Priority.
- If a sidewalk is built on Balfour Drive and the school property it should be installed in a way that is highly visible at school entrances and exits.
    - Recommendation: In order to be more visible high visibility crosswalks, pavement markings and advanced warning signs should be installed along Balfour Drive and the school property – No priority was specified.
- The north side of the school property lacks connections to existing neighborhood streets and proposed greenway.
    - Recommendation: Install a path that connects the school with the ball field north of it and Davidson Street – High Priority.

Archdale Elementary School

- Some parents use the parking lot of the church located on Trindale Road and walk their kids to school. Currently there is no sidewalk along this road.
    - Recommendation; Construct sidewalks on Trindale Road from Main Street to Greenway past Archdale Road – High Priority.
- The same pedestrians walking from the church parking lot to school and back have to cross Trindale Road at unmarked locations.
    - Recommendation: Install crosswalk across Trindale Road near church parking lot - High Priority.
- Intersection of Main Street and Trindale Road is wide and dangerous to cross.
    - Recommendation: Install a crosswalk with a pedestrian signal and refuge island on Main Street. This treatment can reduce the risk of crossing this busy road – Medium Priority.
- West White Road lacks pavement marking indicating the presence of a school.
    - Recommendation: Install pavement markings and signing indicating school zone– No priority was specified.
- Hillcrest Lane is a one-way street and is also used as a parking lot. Despite the presence of signs indicating the one-way street, often vehicles enter the street from the wrong side.
    - Recommendation: Install advanced signs giving drivers additional warning about a one-way street, install flashing lights active during school hours or drop-off and pick-up hours– No priority was specified.
- White Drive is used by parent to park while waiting for their kids. Sometimes the queue spills onto Archdale Road.
    - Recommendation: Enforce one-way traffic during pick-up/drop-off hours and install “No parking” signs on south side of the street. Some parents may not consider waiting for their children parking, so additional text may be added to signs– No priority was specified.

Archdale Trinity Middle School

- There is an opportunity to create a connector between the school grounds and the neighborhoods north and east of it.
    - Recommendation: Install the proposed greenway connection to Robin Lane following a sewer line easement will provide direct access to school for kids living in close proximity – No priority was specified.
- There is an existing greenway at Creekside Park, which is used by Archdale residents.
    - Recommendation: Extend the proposed path in Archdale’s Sidewalks and Greenways Plan following sewer line easement past Robin Lane with a possibility of connecting to the existing greenway– No priority was specified.
- If such connections are executed it is reasonable to expected peak in bicycle traffic to the school grounds.

    - Recommendation: Provide bicycle parking facilities – No priority was specified.
- There is no sidewalk at the school.
    - Recommendation: Install sidewalks along school driveway to Archdale Road and to proposed greenway– No priority was specified.

John Lawrence Elementary School

- The school is located on Suites Road, which is two-lane rural road with no sidewalk on either side of the road. Across the school is a residential neighborhood where number of students live.
    - Recommendations: Install sidewalks on the side of the residential neighborhood as well as a pedestrian crosswalk with appropriate signage in front of the school – High Priority (There is a planned NCDOT widening project for a section of this road, which may help with incorporating sidewalk installation under the same project).
- Weant Road is perpendicular to Suites Road and runs through the residential neighborhoods across from the school.
    - Recommendation: Install sidewalks on Weant Road and install a high visibility crosswalk at the intersection with Suites Road – Medium Priority.

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MEETING MINUTES

Subject:
SRTS- Archdale Draft Action Plan Meeting

Department:
Transportation

ARCADIS Project No.:
NC608009.0003 0ARCH

Place/Date of Meeting:
December 15, 2010
Archdale Public Library
10433 S. Main Street

Copies:
Ed Johnson
Meeting Participants

Minutes by:
Lou Raymond and Katie Mencarini

Issue Date:
January 26, 2011

Participants:
Shea Cox, Randolph County Health Dept.
Mary Rulli, Archdale Planning & Zoning
Jennifer Britt, NCDOT
Justin Richardson, NCDOT
Hanna Cockburn, Piedmont Triad RPO
Darrell Gibbs, Archdale Police
Terry Burgin, Trindale Elementary

Jason Miller, City of Archdale
Zeb Holden, City of Archdale
DJ Seneres, City of Archdale
Ed Johnson, NCDOT SRTS
Katie Mencarini, TDG
Lou Raymond, ARCADIS

Meeting Purpose:

The purpose of the meeting was to present and discuss the Project Team's draft Action Plan for Archdale Elementary School, John Lawrence Elementary, Trindale Elementary School and Archdale-Trinity Middle School. NCDOT and the City of Archdale had initially been provided with a draft Action Plan; however, their comments were not incorporated prior to the meeting.

Specific to the draft Action Plan, the bulk of what was reviewed (Chapters 3 and 4 of the draft Action Plan) covered strategies, considerations, recommendations, and priorities as they related to infrastructure (Engineering) and non-infrastructure (Education, Encouragement, Enforcement, and Evaluation). Also covered was program implementation and sustainability (Chapter 5 of the draft Action Plan). Feedback from the Archdale SRTS Team was incorporated into a revised draft Action Plan for the four Archdale schools.

Discussion Highlights:

Lou Raymond welcomed everyone to the meeting opened with a brief recap of the project history, purposes of the first and second meetings and an update on the project's progress. Ed Johnson introduced himself as the newly hired NCDOT Safe Routes to School Coordinator and mentioned that there will be a call for infrastructure and non-infrastructure grants in the next fiscal year (beginning in October 2011). The introduction concluded with a synopsis of the draft Action Plan and how the document was organized by going over the Table of Contents.

Katie Mencarini then presented the non-infrastructure ("Other E's") strategies and considerations for discussion. Strategies that could be implemented in Archdale in all four schools were discussed. The City of Archdale will seek feedback from the principals at each of the four schools via teleconferences or face-to-face meetings to be sure that the principals understand the strategies and are confident that they can implement them at their schools.

Next, Lou presented the infrastructure improvements, one school at a time, by going through the recommendations that came out of the 2nd Meeting and graphically showing each recommendation on an aerial map. For each recommendation, Lou asked the group for feedback about the actual recommendation itself, the context relative to the school and the other schools, and priority/timeframe.

The following highlight discussion on engineering recommendations by each particular school. It should be noted that there were no objections to the non-infrastructure strategies and recommendations as they appeared in the draft Action Plan.

General Engineering Recommendations

- The City of Archdale should conduct a thorough review of signage and pavement markings in the Archdale school zones and upgrade pavement markings and signage where outdated, worn, or inappropriately positioned in accordance with the 2009 MUTCD.
- The City of Archdale should prioritize sidewalk maintenance and cleaning on routes used by Archdale students to travel to school.
- The City of Archdale should look to the Americans with Disabilities Act (ADA) standards when designing the infrastructure improvements.
- The City of Archdale should consider reducing the posted speed limits and incorporating other traffic calming measures on Suits Road and Archdale Road to improve pedestrian and driver safety. The odds of a pedestrian being killed in a collision with a motor vehicle increase dramatically with vehicular speeds. Children are especially vulnerable.

Archdale Elementary

Corridor	Archdale Elementary School: Recommendations by Location	Priority
AE1	Intersection of Trindale Road and Archdale Friends Meeting House driveway • Stripe high-visibility crosswalk across Trindale Road at the east corner of the driveway. • Install school crossing signage at the marked crossing.	High
	Intersection of Trindale Road and N. Main Street • Stripe high visibility crosswalks at all four legs of the intersection. • Install school crossing signage at all marked crossings. • Retrofit existing curb ramps to meet ADA standards. • Install pedestrian signal heads at all four legs of the intersection with countdowns. Time the signals per the 2009 MUTCD standard of no more than 3.5 feet per second. • Install triangular (pork chop) islands on the northwest and southeast corners of the intersection. • Install curb extensions on the northeast and southwest corners.	High
	Trindale Road between S. Main Street and Archdale Road • Install sidewalk conforming to ADA standards on south side of Trindale Road.	Medium
	Trindale Road between Archdale Road and Wynnewood Drive • Stripe high-visibility crosswalk across Bonnie Place, and at the driveways on the block between Bonnie Place and Wynnewood Drive. • Install school crossing signage at all marked crossings.	Medium
	Intersection of Trindale Road and Archdale Road • Retrofit existing curb ramps to meet ADA standards. • Install countdown signals to accompany existing pedestrian signal heads.	Medium
AE2	Archdale Road between W. White Drive and Trindale Road • Install sidewalk conforming to ADA standards on east side of Archdale Road between W. White Drive and Trindale Road. • Stripe high-visibility crosswalk across busy driveway on the eastside of Archdale Road.	Medium

Corridor	Archdale Elementary School: Recommendations by Location	Priority
AE3	W. White Drive between Archdale Road and N. Main Street • Install "School" Pavement markings at both approaches to the school driveway on W. White Drive. • Install sidewalks conforming to ADA standards on south side of W. White Drive between Archdale Road and N. Main Street and install high visibility crosswalks at the intersections of Bonnie Place and N. Main Street. • Widen existing sidewalks on the north side of the street to meet ADA standards. • Consider eliminating parking during school drop-off and pick- up hours. • Consider making W. White Drive a one way Street (permit traffic moving westward) during drop-off and pick-up hours.	High
	W. White Drive between Archdale Elementary School and N. Main Street • Widen existing sidewalk on the north side of the street to meet ADA standards (currently four-feet wide).	Medium

John Lawrence Elementary

Corridor	John Lawrence Elementary School: Recommendations by Location	Priority
JL1	Suits Road between S. Main Street and Weant Road • Install sidewalks conforming to ADA standards on south side of the street. • Install sidewalks conforming to ADA standards on the north side of the street. • Install high visibility crosswalks across all driveways on this segment. • Install school crossing signage at all marked crossings.	High
	Suits Road between S. Main Street and Trotter County Road • Consider reducing speed limit to 35 mph and 25 mph within school zone.	High
	Suits Road between the Weant Road and Trotter County Road • Install sidewalks conforming to ADA standards on south side of the street. • Install high visibility crosswalks across all driveways on this segment. • Install school crossing signage at all marked crossings.	Medium
JL2	Weant Road between Suits Road and Trey Lane • Install sidewalks conforming to ADA standards on both sides of the street between Suits Road and Trey Lane.	High

Corridor	John Lawrence Elementary School: Recommendations by Location	Priority
	Intersection of Weant Road and Suits Road • Install a high-visibility raised crosswalk on western leg of the intersection. • Install a high-visibility crosswalk across the northern leg of the intersection. • Install school crossing signage at the marked crosswalks.	High

Trindale Elementary School

Corridor	Trindale Elementary School: Recommendations by Location	Priority
TE1	Balfour Drive between Archdale Road and Brookhollow Drive • Install sidewalks conforming to ADA standards on the north side of Balfour Drive. • Install "School" Pavement markings for both directions of traffic on Balfour Drive. • Install school crossing signage at the marked crosswalk.	High
	Balfour Drive between Brookhollow Drive and S. Main Street • Install high visibility crosswalks across Brookhollow Lane. • Install "School" Pavement markings for both directions of traffic on Balfour Drive. • Install school crossing signage at the marked crosswalk.	Medium
	Intersection of S. Main Street and Balfour Drive • Install pedestrian countdown signal heads for all four legs of the intersection. • Retrofit existing curb ramps to meet ADA standards. • Stripe high visibility crosswalks at all four legs of the intersection. • Install school crossing signage at all marked crossings.	Medium
TE2	Off-road trail segment between Balfour Drive • Construct a greenway trail to connect Balfour Drive to the existing greenway trail, with access off of Beard Avenue. • Vegetation will need to be trimmed and maintained to facilitate pedestrian travel between the two sites.	Medium
TE3	Trindale School Drive (School Main Entrance Driveway) • Install a sidewalk on the north side of the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Balfour Drive.	High

Archdale-Trinity Middle School (7th – 8th Grades)

Corridor	Archdale-Trinity Middle School: Recommendations by Location	Priority
ATM 1	Off-road Greenway Trail Connection between School Property and existing trail connection, north of Roby Drive • Construct a greenway trail to connect the school property to the existing trail connection, located north of Roby Drive. Note: There are many possibilities for connecting the greenway to the school. This plan does not limit the potential connections to one location.	High
ATM 2	Intersection of School Entrance Driveway and Archdale Road • Stripe a high visibility crosswalk across Archdale road on the western leg of the intersection. • Install pedestrian signal heads with countdowns at all legs of the intersection. • Stripe a high visibility crosswalk across the school entrance driveway. • Install school crossing signage at all marked crosswalks.	High
	Archdale Road between Winchester Court and School Entrance • Install sidewalks conforming to ADA standards on the both sides of Archdale Road.	High
	Archdale Road between Trinity Road and Winchester Court • Install sidewalks conforming to ADA standards on the both sides of Archdale Road. • Install "School" Pavement markings on Archdale Road for westward moving traffic. (They are present for eastbound traffic).	Medium
	Archdale Road between School Entrance and Springwood Lane • Install sidewalks conforming to ADA standards on the both sides of Archdale Road. • Install "School" Pavement markings on Archdale Road for westward moving traffic. (They are present for eastbound traffic).	Medium
	Archdale Road between Trinity Road and Springwood Lane • Consider reducing speed limit from 35 mph and 25 mph within school zone.	Medium
ATM3	School Main Entrance Driveway • Install a sidewalk on the west side of the driveway to connect the school's main entrance to the proposed sidewalk on the north side of Archdale Road.	High
	School Property • Install inverted U bike racks on the school property. Preferred placement would be in the school plaza under the canopy.	Medium

Next Steps

The meeting was concluded with a discussion of the next steps to be taken by all parties. The project team will send out the current draft Action Plan to the School Team email distribution list and request comments by the second week in January 2011. Feedback from the four schools as related to the strategies, considerations, recommendations, and priorities is of utmost importance.

The Final Action Plan is expected to be completed by the end of January 2011 with subsequent approval and/or adoption by the Archdale City Council.

APPENDIX C: FUNDING SOURCES

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Funding Sources

Local, state, federal, and private funding is available to support the planning, construction, right of way acquisition and maintenance of bicycle and pedestrian facilities. Available funding sources are related to a variety of purposes including transportation, water quality, hazard mitigation, recreation, air quality, wildlife protection, community health, and economic development.

This appendix identifies a list of some of the bicycle and pedestrian facility funding opportunities available through federal, state, nonprofit and corporate sources that may be appropriate for Belmont. An important key to obtaining funding is for local governments to have adopted plans for greenway, bicycle, and pedestrian or trail systems in place prior to making an application for funding. The Belmont SRTS Action Plan, when adopted by the City Council, may serve as an appropriate plan to support the application for funding from these sources.

Funding Allocated by State Agencies

Funding Opportunities through NCDOT:

Bicycle and Pedestrian Independent Projects Funded Through the Transportation Improvement Program (TIP)

In North Carolina, the Department of Transportation, Division of Bicycle and Pedestrian Transportation (DBPT) manages the Transportation Improvement Program (TIP) selection process for bicycle and pedestrian projects. Projects programmed into the TIP are independent projects – those which are not related to a scheduled highway project. Incidental projects – those related to a scheduled highway project – are handled through other funding sources described in this section. The division has an annual budget of $6 million. Eighty percent of these funds are from STP-Enhancement funds[34], while the State Highway Trust provides the remaining 20 percent of the funding. Each year, the DBPT regularly sets aside a total of $200,000 of TIP funding for the department to fund projects such as training workshops, pedestrian safety and research projects, and other pedestrian needs statewide. Those interested in learning about training workshops, research and other opportunities should contact the DBPT for information.

A total of $5.3 million dollars of TIP funding is available for funding various bicycle and pedestrian independent projects, including the construction of multi-use trails, the striping of bicycle lanes, and the construction of paved shoulders, among other facilities. Prospective applicants are encouraged to contact the DBPT regarding funding assistance for bicycle and pedestrian projects. For a detailed description of the TIP project selection process, visit: http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html. Another $500,000 of the division's funding is available for miscellaneous projects.

Incidental Projects – Bicycle and pedestrian accommodations such as bike lanes, widened paved shoulders, sidewalks and bicycle-safe bridge design are frequently included as incidental features of highway projects. In addition, bicycle-safe drainage grates are a standard feature of all highway construction. Most bicycle and pedestrian safety accommodations built by NCDOT are included as part

[34] After various administrative adjustments for programs within the Surface Transportation Program, or "STP", there is a 10% set-aside for Transportation Enhancements. The 10% set-aside is allocated within NCDOT to internal programs such as the Bicycle/Pedestrian Division, the Rail Division, the Roadside Environmental Unit, and others. The Enhancement Unit administers a portion of the set-aside through the Call for Projects process.

of scheduled highway improvement projects funded with a combination of National Highway System funds and State Highway Trust Funds.

Sidewalk Program – Each year, a total of $1.4 million in STP-Enhancement funding is set aside for sidewalk construction, maintenance and repair. Each of the 14 highway divisions across the state allocates $100,000 annually from each division's budget for this purpose. Funding decisions are made by the district engineer. Prospective applicants are encouraged to contact their district engineer for information on how to apply for funding.

Governor's Highway Safety Program (GHSP) – The mission of the GHSP is to promote highway safety awareness and reduce the number of traffic crashes in the state of North Carolina through the planning and execution of safety programs. GHSP funding is provided through an annual program, upon approval of specific project requests. Amounts of GHSP funds vary from year to year, according to the specific amounts requested. Communities may apply for a GHSP grant to be used as seed money to start a program to enhance highway safety. Once a grant is awarded, funding is provided on a reimbursement basis. Evidence of reductions in crashes, injuries, and fatalities is required. For information on applying for GHSP funding, visit: www.ncdot.org/programs/ghsp/.

Funding Available Through North Carolina Metropolitan Planning Organizations (MPOs)

MPOs in North Carolina which are located in air quality nonattainment or maintenance areas have the authority to program Congestion Mitigation Air Quality (CMAQ) funds. CMAQ funding is intended for projects that reduce transportation related emissions. Some NC MPOs have chosen to use the CMAQ funding for bicycle and pedestrian projects. Local governments in air quality nonattainment or maintenance area should contact their MPO for information on CMAQ funding opportunities for bicycle and pedestrian facilities.

Transportation Enhancement Call for Projects, EU, NCDOT

The Enhancement Unit administers a portion of the enhancement funding set-aside through the Call for Projects process. In North Carolina the Enhancement Program is a federally funded cost reimbursement program with a focus upon improving the transportation experience in and through local North Carolina communities either culturally, aesthetically, or environmentally. The program seeks to encourage diverse modes of travel, increase benefits to communities and to encourage citizen involvement. This is accomplished through the following twelve qualifying activities:

1. Bicycle and Pedestrian Facilities
2. Bicycle and Pedestrian Safety
3. Acquisition of Scenic Easements, Scenic or Historic Sites
4. Scenic or Historic Highway Programs (including tourist or welcome centers)
5. Landscaping and other Scenic Beautification
6. Historic Preservation
7. Rehabilitation of Historic Transportation Facilities
8. Preservation of Abandoned Rail Corridors
9. Control of Outdoor Advertising
10. Archaeological Planning and Research
11. Environmental Mitigation

12. Transportation Museums

Funds are allocated based on an equity formula approved by the Board of Transportation. The formula is applied at the county level and aggregated to the regional level. Available fund amount varies. In previous Calls, the funds available ranged from $10 million to $22 million.

The Call process takes place on even numbered years or as specified by the Secretary of Transportation. The Next Call is anticipated to take place in 2009. For more information, visit: www.ncdot.org/financial/fiscal/Enhancement

Bicycle and Pedestrian Planning Grant Initiative, managed by NCDOT, DBPT

To encourage the development of comprehensive local bicycle plans and pedestrian plans, the NCDOT Division of Bicycle and Pedestrian Transportation (DBPT) and the Transportation Planning Branch (TPB) have created a matching grant program to fund plan development. This program was initiated through a special allocation of funding approved by the North Carolina General Assembly in 2003 along with federal funds earmarked specifically for bicycle and pedestrian planning by the TPB. The planning grant program was launched in January 2004, and it is currently administered through NCDOT-DBPT and the Institute for Transportation Research and Education (ITRE) at NC State University. Over the past three grant cycles, 48 municipal plans have been selected and funded from 123 applicants. A total of $ 1,175,718 has been allocated. Funding is secured for 2007 at $400,000. Additional annual allocations will be sought for subsequent years. For more information, visit www.itre.ncsu.edu/ptg/bikeped/ncdot/index.html

Safe Routes to School Program, managed by NCDOT, Division of Safety and Mobility

The NCDOT Safe Routes to School Program is a federally funded program that was initiated by the passing of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, which establishes a national SRTS program to distribute funding and institutional support to implement SRTS programs in states and communities across the country.

SRTS programs facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The Division of Safety and Mobility at NCDOT is charged with disseminating SRTS funding.

The state of North Carolina has been allocated $15 million in Safe Routes to School funding for fiscal years 2005 through 2009 for infrastructure or non-infrastructure projects. All proposed projects must relate to increasing walking or biking to and from an elementary or middle school. An example of a non-infrastructure project is an education or encouragement program to improve rates of walking and biking to school. An example of an infrastructure project is construction of sidewalks around a school. Infrastructure improvements under this program must be made within 2 miles of an elementary or middle school. The state requires the completion of a competitive application to apply for funding. For more information:

- visit http://www.ncdot.gov/doh/preconstruct/traffic/congestion/cm/msta/docs/SRTS.pdf or
- contact Safe Routes to School Coordinator, Ed Johnson, at (919) 662-4344 or via e-mail at erjohnson2@ncdot.gov.

Powell Bill Program

Annually, State street-aid (Powell Bill) allocations are made to incorporated municipalities which establish their eligibility and qualify as provided by statute. This program is a state grant to municipalities for the purposes of maintaining, repairing, constructing, reconstructing or widening of local streets that are the responsibility of the municipalities or for planning, construction, and maintenance of bikeways or sidewalks along public streets and highways. Funding for this program is collected from fuel taxes. Amount of funds are based on population and mileage of town-maintained streets. For more information, visit http://www.ncdot.org/programs/Powell_Bill.

North Carolina Health and Wellness Trust Fund

The NC Health and Wellness Trust Fund was created by the General Assembly as one of three entities to invest North Carolina's portion of the Tobacco Master Settlement Agreement. The NC Health and Wellness Trust Fund receives one-fourth of the state's tobacco settlement funds, which are paid in annual installments over a 25-year period.

Fit Together, a partnership of the NC Health and Wellness Trust Fund and Blue Cross and Blue Shield of North Carolina announces the establishment of Fit Community, a designation and grant program that recognizes and rewards North Carolina communities' efforts to support physical activity and healthy eating initiatives, as well as tobacco-free school environments. Fit Community is one component of the jointly sponsored Fit Together initiative, a statewide prevention campaign designed to raise awareness about obesity and to equip individuals, families and communities with the tools they need to address this important issue.

All North Carolina municipalities and counties are eligible to apply for a Fit Community designation, which will be awarded to those that have excelled in supporting the following:

- physical activity in the community, schools, and workplaces
- healthy eating in the community, schools, and workplaces
- tobacco use prevention efforts in schools
- Designations will be valid for two years, and designated communities may have the opportunity to reapply for subsequent two-year extensions. The benefits of being a Fit Community include:
- heightened statewide attention that can help bolster local community development and/or economic investment initiatives (highway signage and a plaque for the Mayor's or County Commission Chair's office will be provided)
- reinvigoration of a community's sense of civic pride (each Fit Community will serve as a model for other communities that are trying to achieve similar goals)
- use of the Fit Community designation logo for promotional and communication purposes. The application for Fit Community designation is available on the

Fit Together Web site: www.FitTogetherNC.org/FitCommunity.aspx.

Fit Community grants are designed to support innovative strategies that help a community meet its goal to becoming a Fit Community. Eight to nine, two-year grants of up to $30,000 annually will be awarded to applicants that have a demonstrated need, proven capacity, and opportunity for positive change in addressing physical activity and/or healthy eating. For more information, visit: www.healthwellnc.com/.

Local Funding Sources

Municipalities often plan for the funding of pedestrian facilities or improvements through development of Capital Improvement Programs (CIP). In Raleigh, for example, the greenways system has been developed over many years through a dedicated source of annual funding that has ranged from $100,000 to $500,000, administered through the Recreation and Parks Department. CIPs should include all types of capital improvements (water, sewer, buildings, streets, etc.) versus programs for single purposes. This allows municipal decision-makers to balance all capital needs. Typical capital funding mechanisms include the following: capital reserve fund, capital protection ordinances, municipal service district, tax increment financing, taxes, fees, and bonds. Each of these categories are described below.

Municipalities have statutory authority to create capital reserve funds for any capital purpose, including pedestrian facilities. The reserve fund must be created through ordinance or resolution that states the purpose of the fund, the duration of the fund, the approximate amount of the fund, and the source of revenue for the fund. Sources of revenue can include general fund allocations, fund balance allocations, grants and donations for the specified use.

<u>Capital Project Ordinances</u>

Municipalities can pass Capital Project Ordinances that are project specific. The ordinance identifies and makes appropriations for the project.

<u>Fees</u>

The following fee options that have been used by local governments to assist in funding pedestrian and bicycle facilities are listed here:

Stormwater Charges

Stormwater charges are typically based on an estimate of the amount of impervious surface on a user's property. Impervious surfaces (such as rooftops and paved areas) increase both the amount and rate of stormwater runoff compared to natural conditions. Such surfaces cause runoffs that directly or indirectly discharges into public storm drainage facilities and creates a need for stormwater management services. Thus, users with more impervious surface are charged more for stormwater service than users with less impervious surface. The rates, fees, and charges collected for stormwater management services may not exceed the costs incurred to provide these services. The costs that may be recovered through the stormwater rates, fees, and charges includes any costs necessary to assure that all aspects of stormwater quality and quantity are managed in accordance with federal and state laws, regulations, and rules.

Impact Fees

Developers can be required to provide greenway impact fees through local enabling legislation. Impact fees, which are also known as capital contributions, facilities fees, or system development charges, are typically collected from developers or property owners at the time of building permit issuance to pay for capital improvements that provide capacity to serve new growth. The intent of these fees is to avoid burdening existing customers with the costs of providing capacity to serve new growth ("growth pays its own way"). Greenway impact fees are designed to reflect the costs incurred to provide sufficient capacity in the system to meet the additional needs of a growing community. These charges are set in a fee schedule applied uniformly to all new development. Communities that institute impact fees must develop a sound financial model that enables policy makers to justify fee levels for different user groups, and to ensure that revenues generated meet (but do not exceed) the needs of development. Factors

used to determine an appropriate impact fee amount can include: lot size, number of occupants, and types of subdivision improvements. If Wilmington is interested in pursuing open space impact fees, it will require enabling legislation to authorize the collection of the fees.

Pedestrian Benefit Zones

Pedestrian Benefit Zones are used by some cities to augment limited sidewalk construction funds in specific areas. This approach is similar to a fee-in-lieu program, except that clearly defined "benefit zones" are developed that target the expenditure of funds. The City of Salisbury, NC has developed a program that identifies seven discrete benefit zones around the city.

Exactions

Exactions are similar to impact fees in that they both provide facilities to growing communities. The difference is that through exactions it can be established that it is the responsibility of the developer to build the greenway or pedestrian facility that crosses through the property, or adjacent to the property being developed.

APPENDIX D: WALKING SCHOOL BUS GUIDE

This Guide was created by the National Center for Safe Routes to School and is available online at this location: http://www.saferoutesinfo.org/guide/walking_school_bus/pdf/wsb_guide.pdf

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APPENDIX E: COMPLETE SUMMARIES OF PARENTS SURVEYS AND STUDENT TALLIES

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Archdale Elementary School

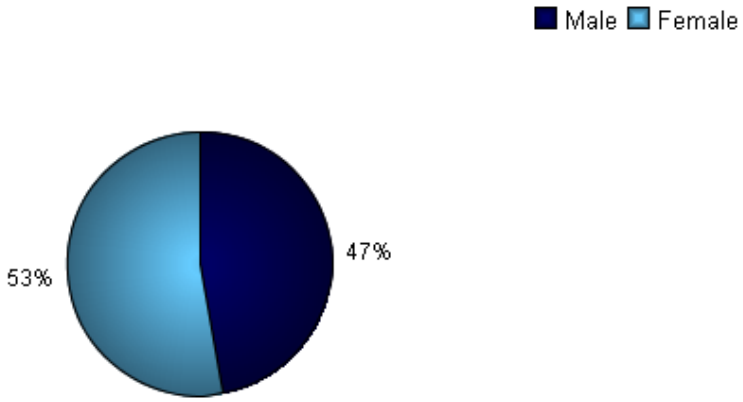
Parent Surveys and Student Tallies Summary Report

Parent Survey Summary

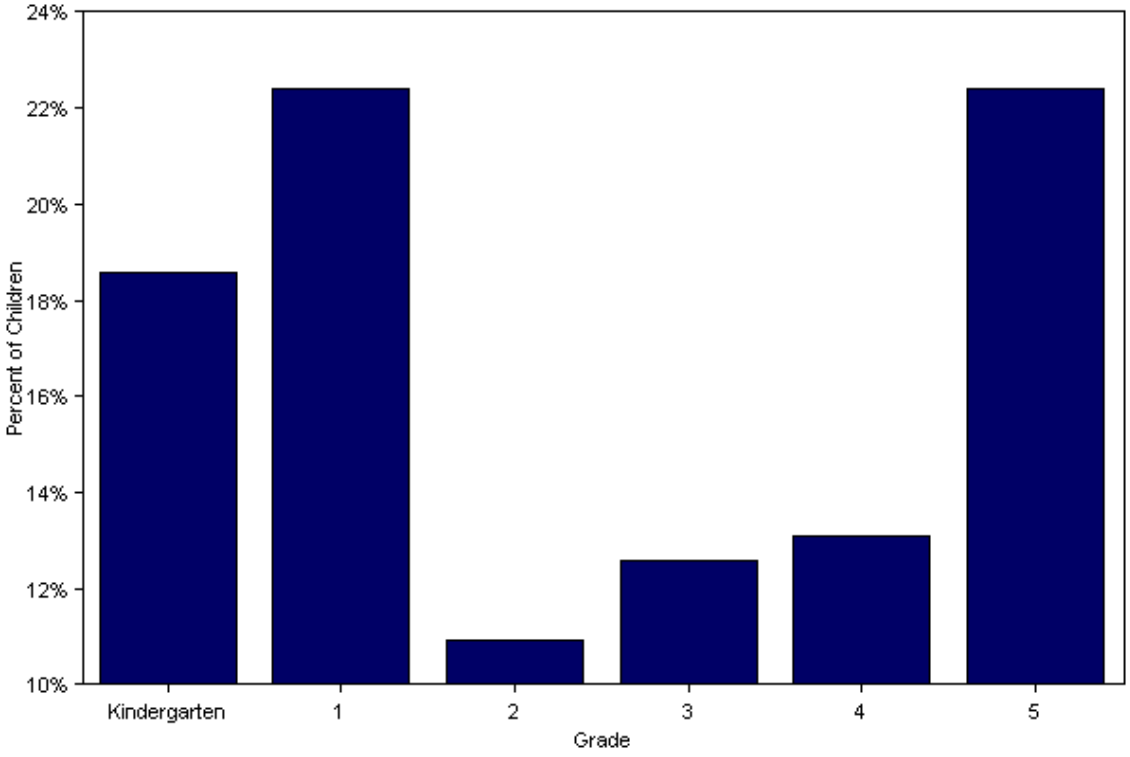
Program Name:	City of Archdale	**Month and Year Collected:**	January 2010
School Name:	Archdale Elementary School	**Set ID:**	3383
School Enrollment:	428	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	428	**Number of Questionnaires Analyzed for Report:**	184
Number of Questionnaires Distributed:	428		

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

Sex of children for parents that provided information



Grade levels of children represented in survey

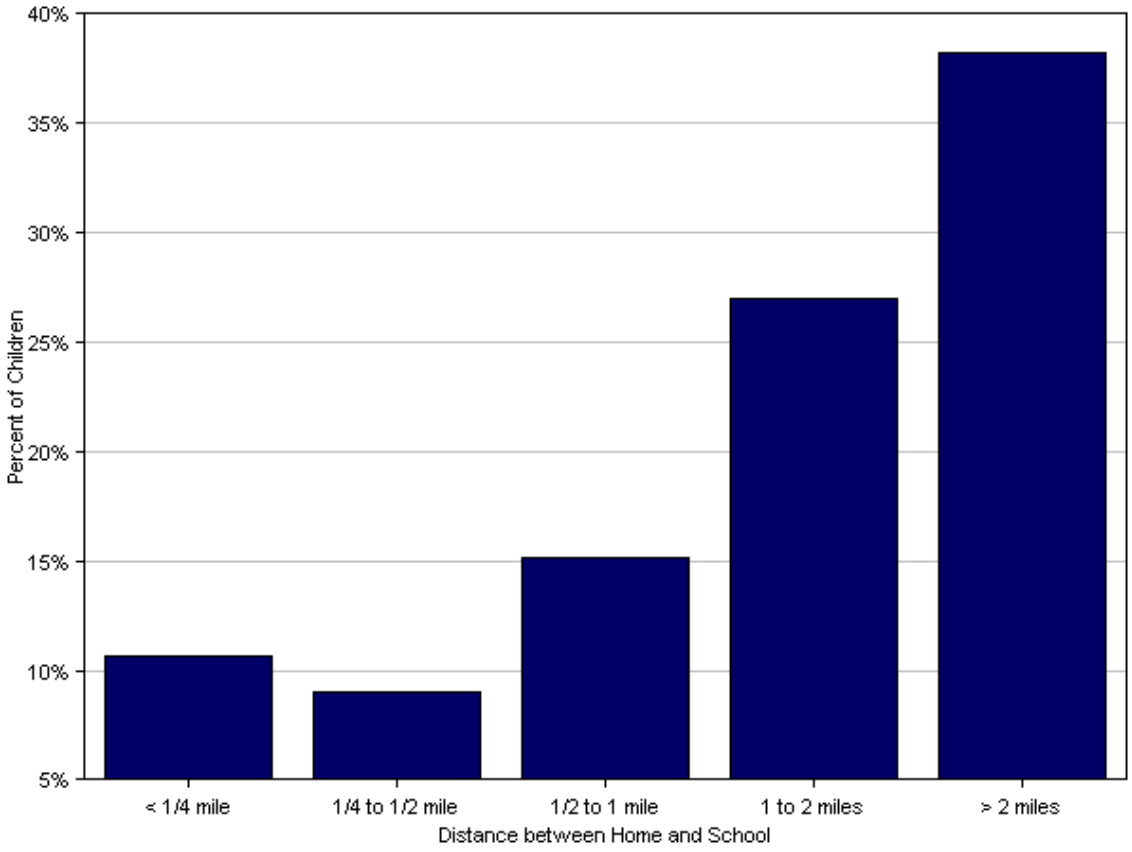


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	34	19%
1	41	22%
2	20	11%
3	23	13%
4	24	13%
5	41	22%

No response: 1
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

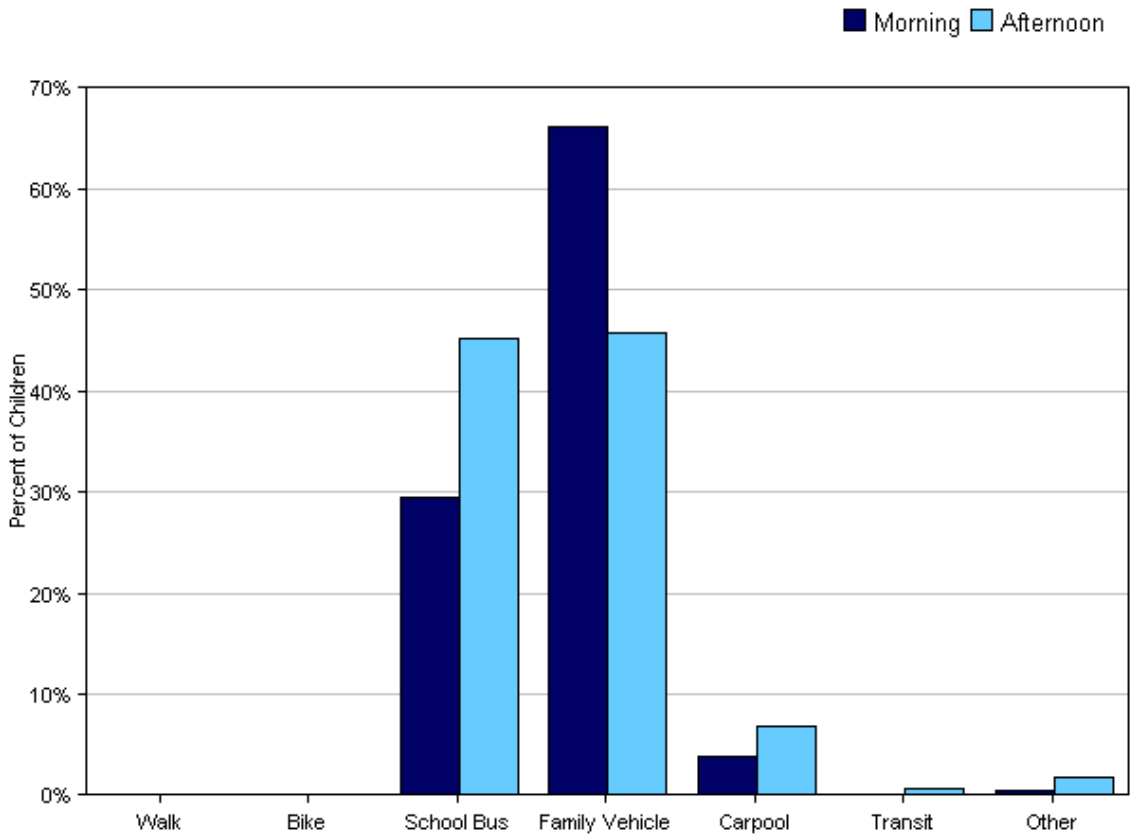


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	19	11%
1/4 mile up to 1/2 mile	16	9%
1/2 mile up to 1 mile	27	15%
1 mile up to 2 miles	48	27%
More than 2 miles	68	38%

Don't know or No response: 6
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

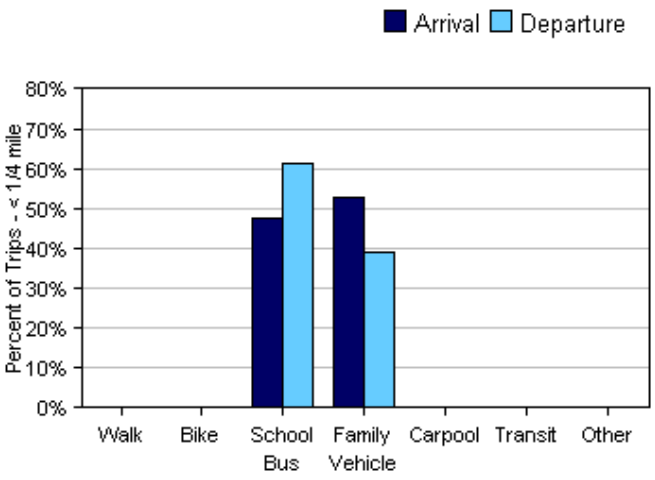


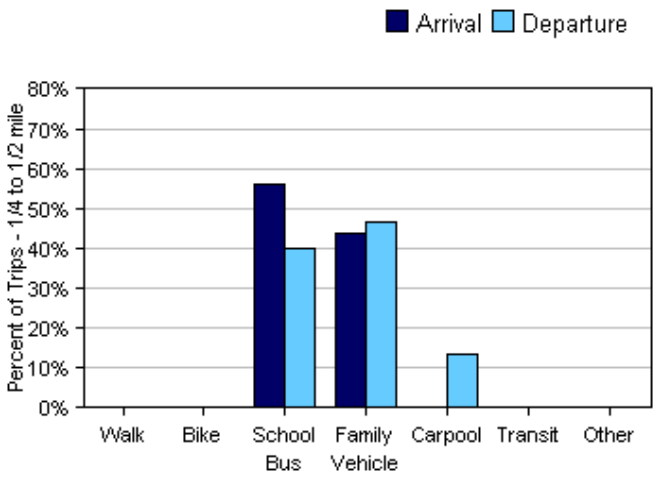
Typical mode of arrival at and departure from school

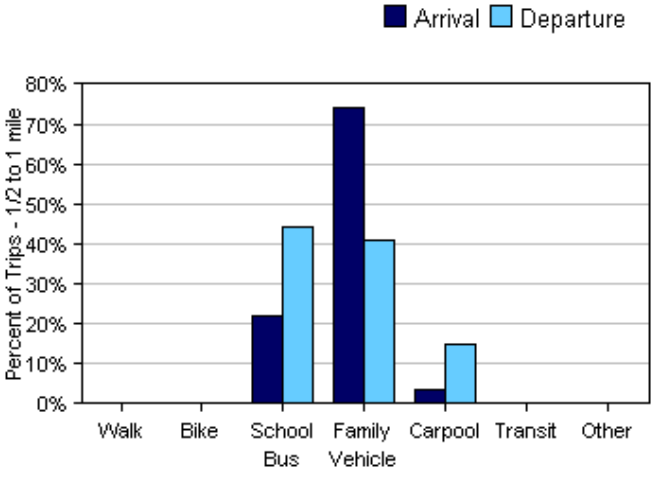
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	183	0%	0%	30%	66%	4%	0%	0.5%
Afternoon	177	0%	0%	45%	46%	7%	0.6%	2%

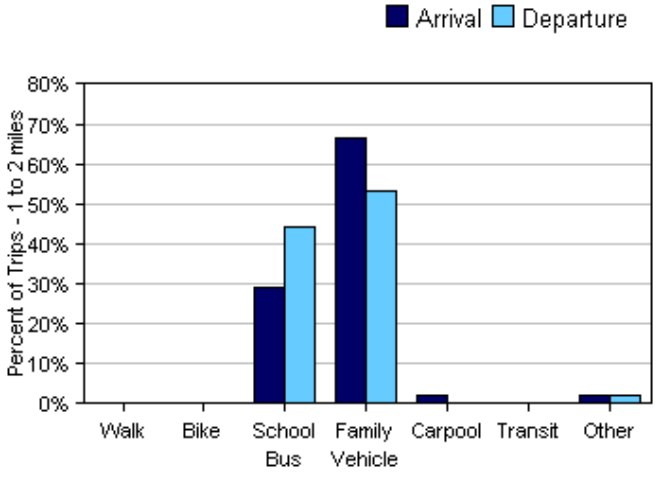
No Response Morning: 1
No Response Afternoon: 7
Percentages may not total 100% due to rounding.

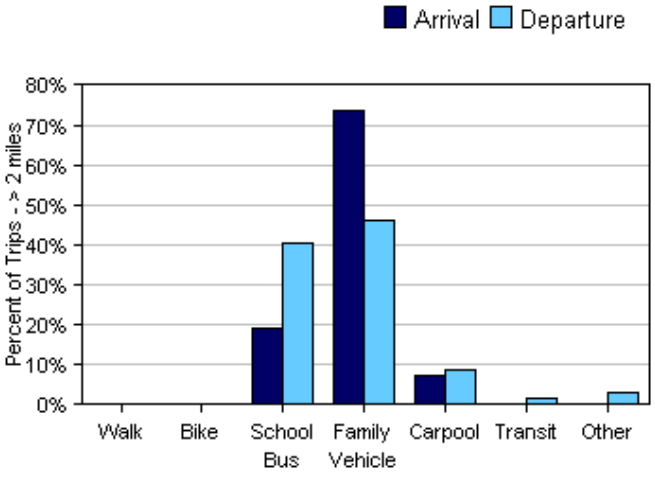
Typical mode of school arrival and departure by distance child lives from school











Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	19	0%	0%	47%	53%	0%	0%	0%
1/4 mile up to 1/2 mile	16	0%	0%	56%	44%	0%	0%	0%
1/2 mile up to 1 mile	27	0%	0%	22%	74%	4%	0%	0%
1 mile up to 2 miles	48	0%	0%	29%	67%	2%	0%	2%
More than 2 miles	68	0%	0%	19%	74%	7%	0%	0%

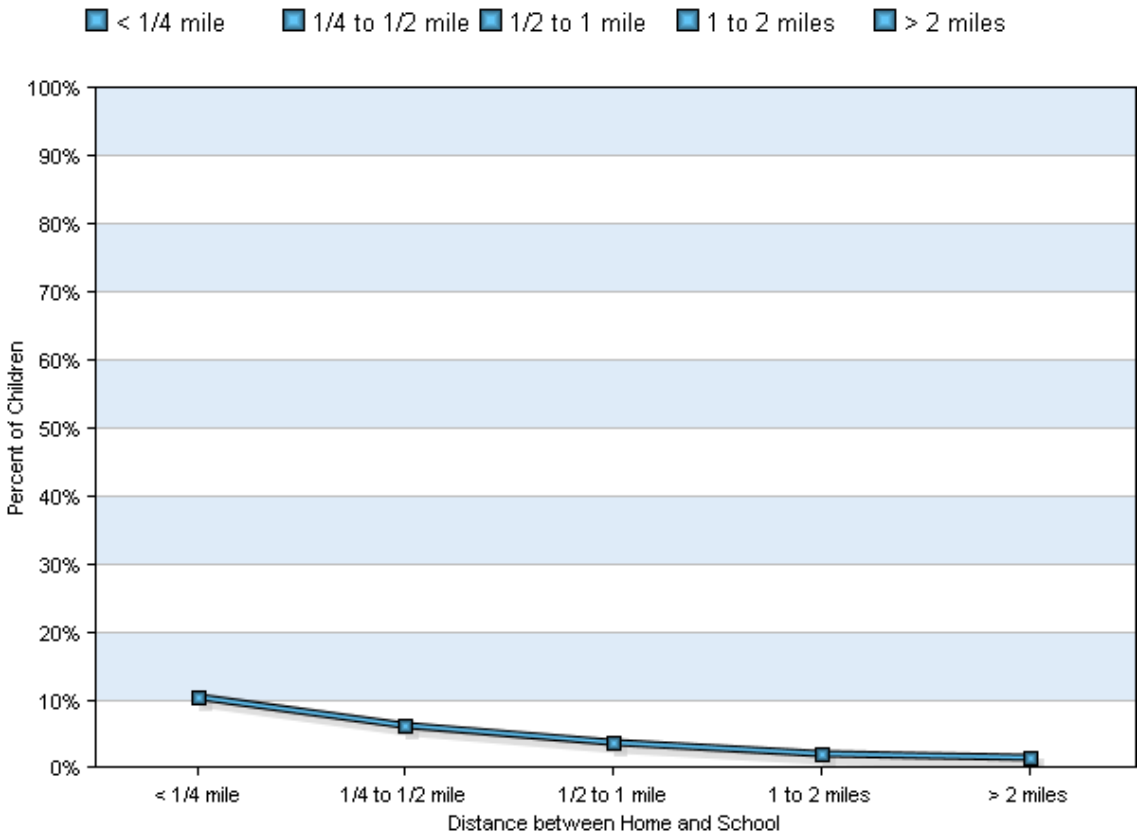
Don't know or No response: 6
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	18	0%	0%	61%	39%	0%	0%	0%
1/4 mile up to 1/2 mile	15	0%	0%	40%	47%	13%	0%	0%
1/2 mile up to 1 mile	27	0%	0%	44%	41%	15%	0%	0%
1 mile up to 2 miles	45	0%	0%	44%	53%	0%	0%	2%
More than 2 miles	67	0%	0%	40%	46%	9%	1%	3%

Don't know or No response: 12
Percentages may not total 100% due to rounding.

Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

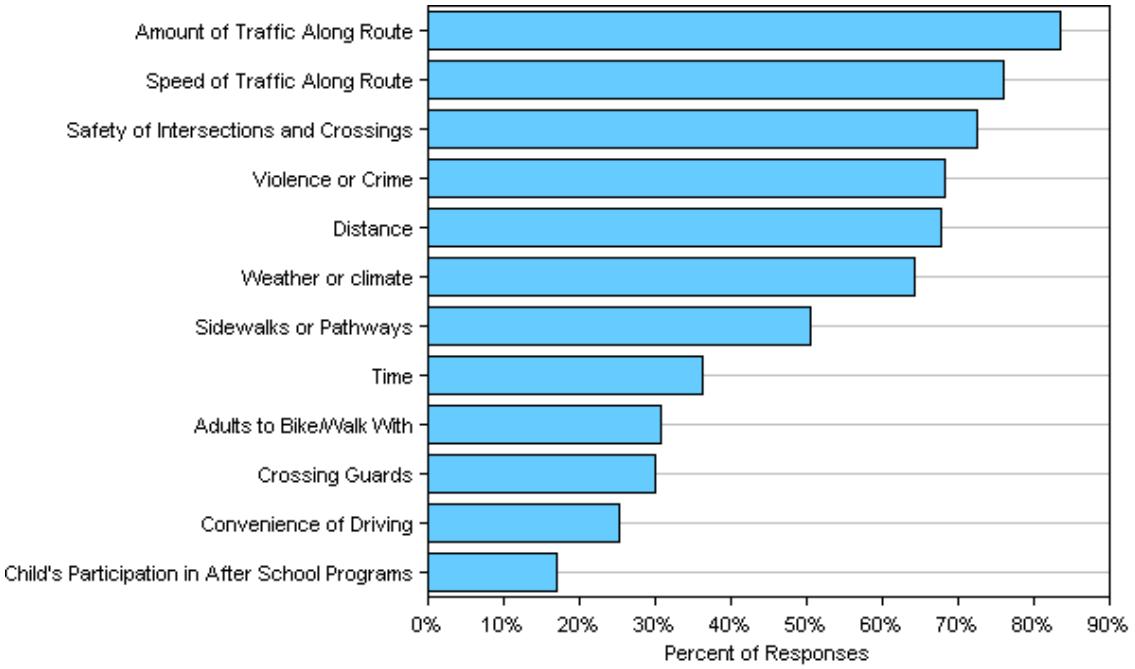


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	6	11%	6%	4%	2%	1%
No	171	89%	94%	96%	98%	99%

Don't know or No response: 7
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school

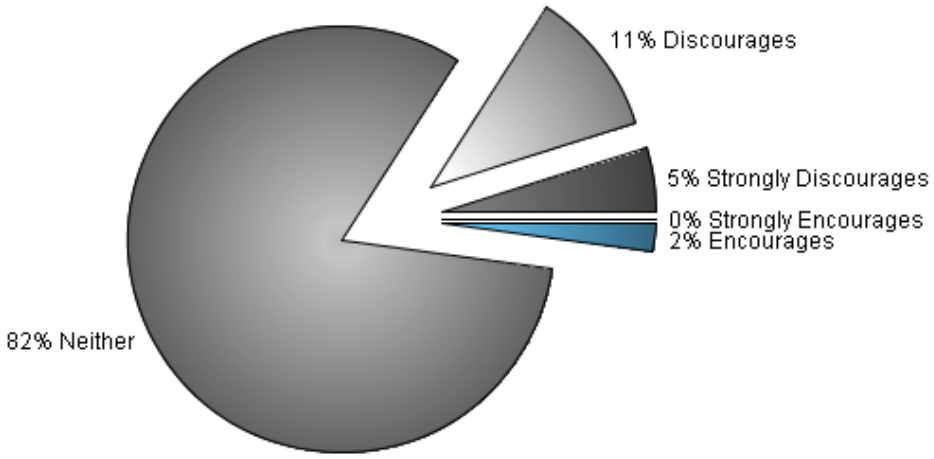


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

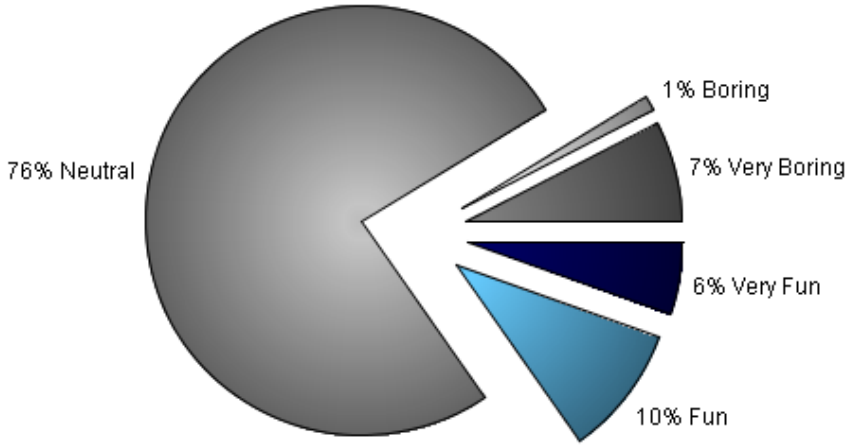
Issue	Child does not walk/bike to school	Child walks/bikes to school
Amount of Traffic Along Route	84%	0
Speed of Traffic Along Route	76%	0
Safety of Intersections and Crossings	73%	0
Violence or Crime	68%	0
Distance	68%	0
Weather or climate	64%	0
Sidewalks or Pathways	51%	0
Time	36%	0
Adults to Bike/Walk With	31%	0
Crossing Guards	30%	0
Convenience of Driving	25%	0
Child's Participation in After School Programs	17%	0
Number of Respondents per Category	**146**	**0**

No response: 38
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

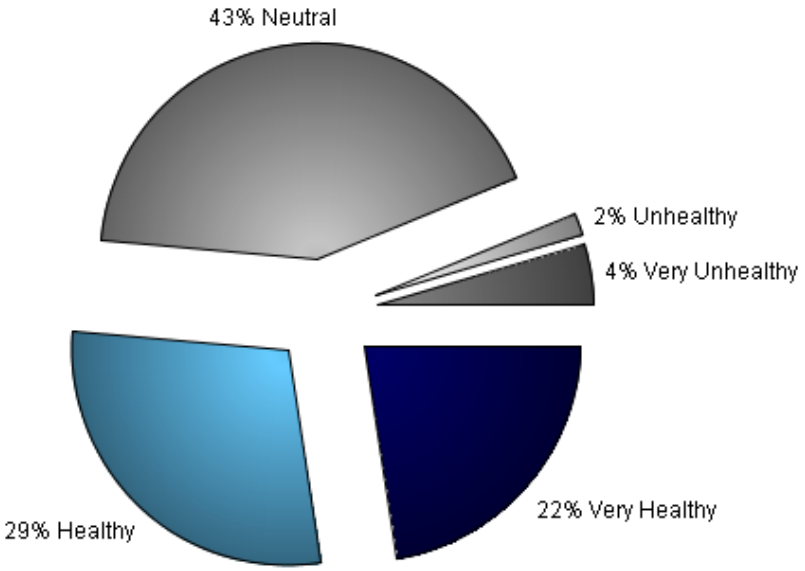
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



Parents' opinions about how much fun walking and biking to/from school is for their child



Parents' opinions about how healthy walking and biking to/from school is for their child



Comments Section

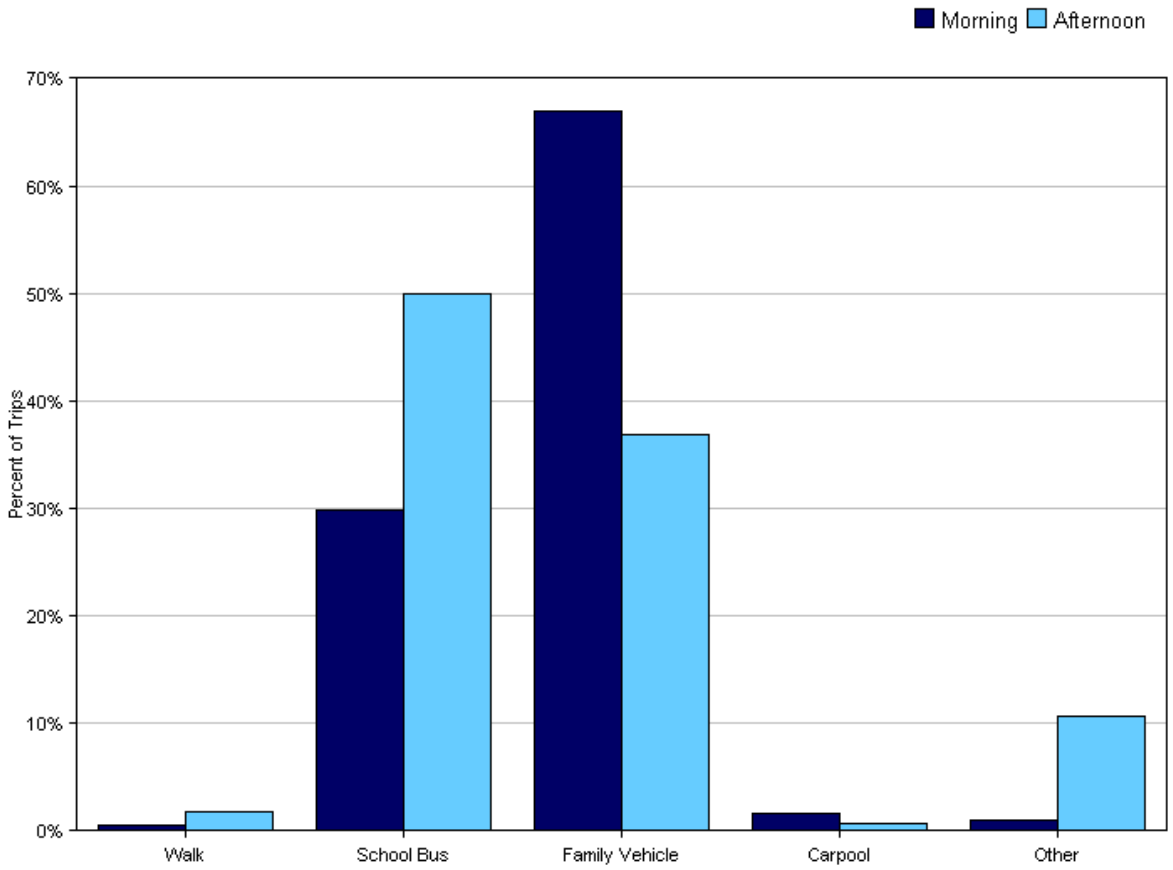
SurveyID	Comment
352125	Children walking or riding a bike to school is not safe at all.
352197	There aren't any sidewalks and people drive wrecklessly. I wouldn't feel at all comfortable for my kids to walk to school unsupervise until they are a teenager.
352214	Archdale is not developed for walking or biking. Archdale has been turned from a small community into a pit stop off the highway.
352218	I would not find it safe for my children to walk/bike to school because of hte heavy traffic around our neighborhood.
352265	Difficult to have children walk to school whenthere are no sidewalks/pathways.
352341	Safety is my primary concern. My children would love to be able to walk to/from school, but I would be too nervous for thier safety from traffic.
352252	We live close to school and if the city works on sidewalks and crossing guards I think you will have many kids walking to school.
352344	If there were better drivers, less speeders, more police and adults to walk with my child I would not mind him walking to school. I can't walk him because I am disabled. Thanks
352083	too much traffic for children to walk or ride bike. crime rate too high.
352124	I would only see walking/biking as an option if we lived within 5 blocks of the school and only with an adult.
352134	If we lived in view of the school, I would probably allow my children to walk there together. Otherwise, I would not allow it without supervision.
352141	if there were sidewalks along main st and crossing guards @ 62 and Main. This may be a a consideration for my child to walk to school.
352285	Walking or biking leaves an open door for pedofiles. If parents were to learn more about sex offenders in their area they would have a guard up against such activities.
352153	We live outside the district, so walking/biking is not an issue/option for him. The district needs more busses to get students home more quickly. or at least change to a hubbing system.
352198	nothing will change my mind. my children will not walk or ride bikes to school. It is not safe, I will not allow it.
352201	I feel that the world is too dangerous to let your children walk or ride a bike alone.
352224	Safety is the biggest issue for me.
352247	I would only consider walk/biking if I lived within 4-5 blocks of school and only with adults
352035	It would be undafe for them to cross over 311 because it is four lanes and traffic is bad in the morning.
352088	in my opinion, allowing child to wlak to shcool is unsafe, although for some who live closer to school its ok only with the supervision of adult always.
352217	Due to our society today there is no safety for our children walking or biking unless we go back to the 50's and 60's.
352238	We would ride our bikes or walk more in our community fi there were more bike trails.
352254	I will not encourage my child to walk or bike because there is no sidewalk.
352261	I'm currently attending GTCC.
352325	Would never allow child to walk or bike because of violence and crime!
352337	In this world we live in I do not feel it would be safe for any child @ any age to walk or bike to/from school!
352017	Dylan does not go to the school that is closest to our house. Even if he did,it is too far for him to walk, or ride his bike safely.
352032	The world is not safe anymore,I will continue to take him to and from until he's old enough to drive.

352117	I just do not feal safe for my son to ever walk anywhere w/out his mother or father
352122	There aren't many sidewalks provided, the chance of being hit by a car is greatly increased due to this fact; Also, not many children walk or bike to and from school in elementary.
352128	In today's society I do not feel any small children should walk along. Seems children are always being abducted.
352222	My kids are to young to walk or ride a bike to school. It also concerns me with the traffic and violence that goes on in the world today.
352231	I would never feel comfortable letting my child walk to school even if we lived 2 houses away. It is not safe for children.
352287	Too many kids live too far away for this to be an issue.
352301	My child will not walk or ride a bike to school due to the times we live in.
352291	Maybe if there was like sidewalks or walkways along the streets and the road than the children could of walked to school.
352164	I would be afraid he wouldn't make it. He is too lazy to make the trip. Traffic is far too busy w/o sidewalks on hwy 62 and archdale rd.
352276	The thought of a child being allowed to walk or bike to school before the age of 13 with a distance less than 1 mile, and with multiple friends makes me question the parenting skills of today's adults.
352333	I do not allow eith one of my children to walk or ride bikes to school. Because there are to many crazy people out there. And to many children getting kidnapped already. And I'm not takeing that chance. Not now! Not EVER!
352123	With so many sex offenders, why even consider this situation?
352205	I would never let my child walk to school is is very unsafe to dangerous to much crim I strongly Disagree
352315	There is no on at home when my child getsout of school so she must go to daycare for about 1 1/2 hours each afternoon.
352215	We live too far for this to apply to my student.
352234	My biggest concern would be violence/crime and traffic. To dangerous in the times we are living!
352296	Dumb survey since I cannot change any of the issues.

Tally Report

Program Name:	City of Archdale	**Month and Year Collected:**	February 2010
School Name:	Archdale Elementary School	**Set ID:**	3898
School Enrollment:	428	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	428	**Number of Classrooms Included in Report:**	11
Number of Classrooms in School:	22		

Morning and Afternoon Travel Mode Comparison

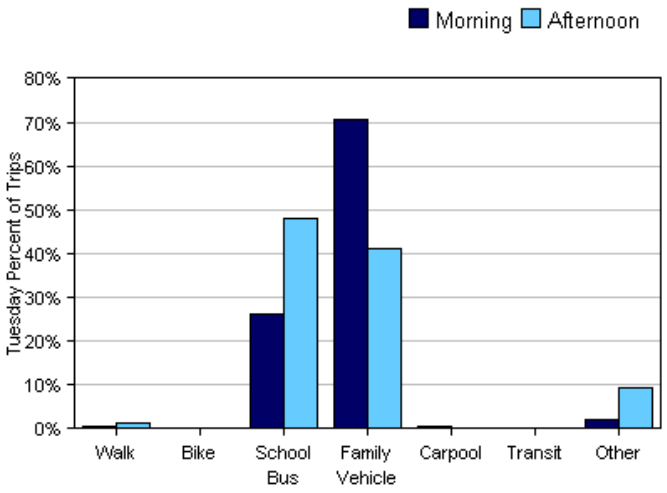


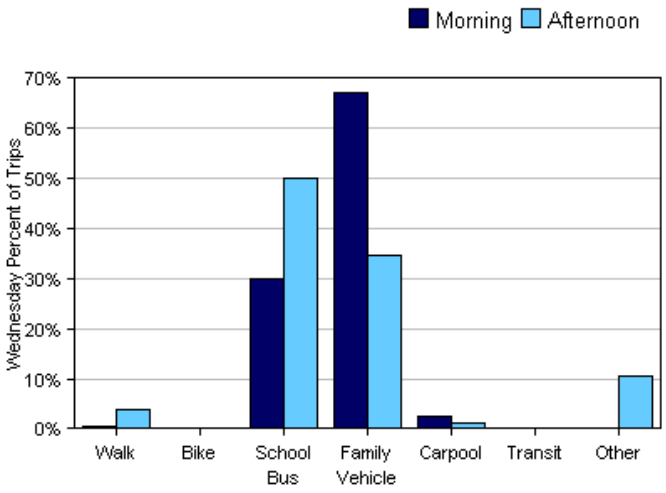
Morning and Afternoon Travel Mode Comparison

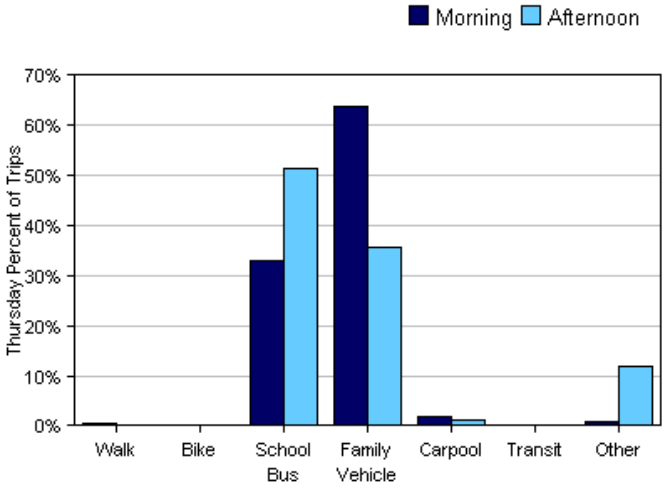
	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	602	0.5%	0%	30%	67%	2%	0%	1.0%
Afternoon	517	2%	0%	50%	37%	0.8%	0%	11%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day





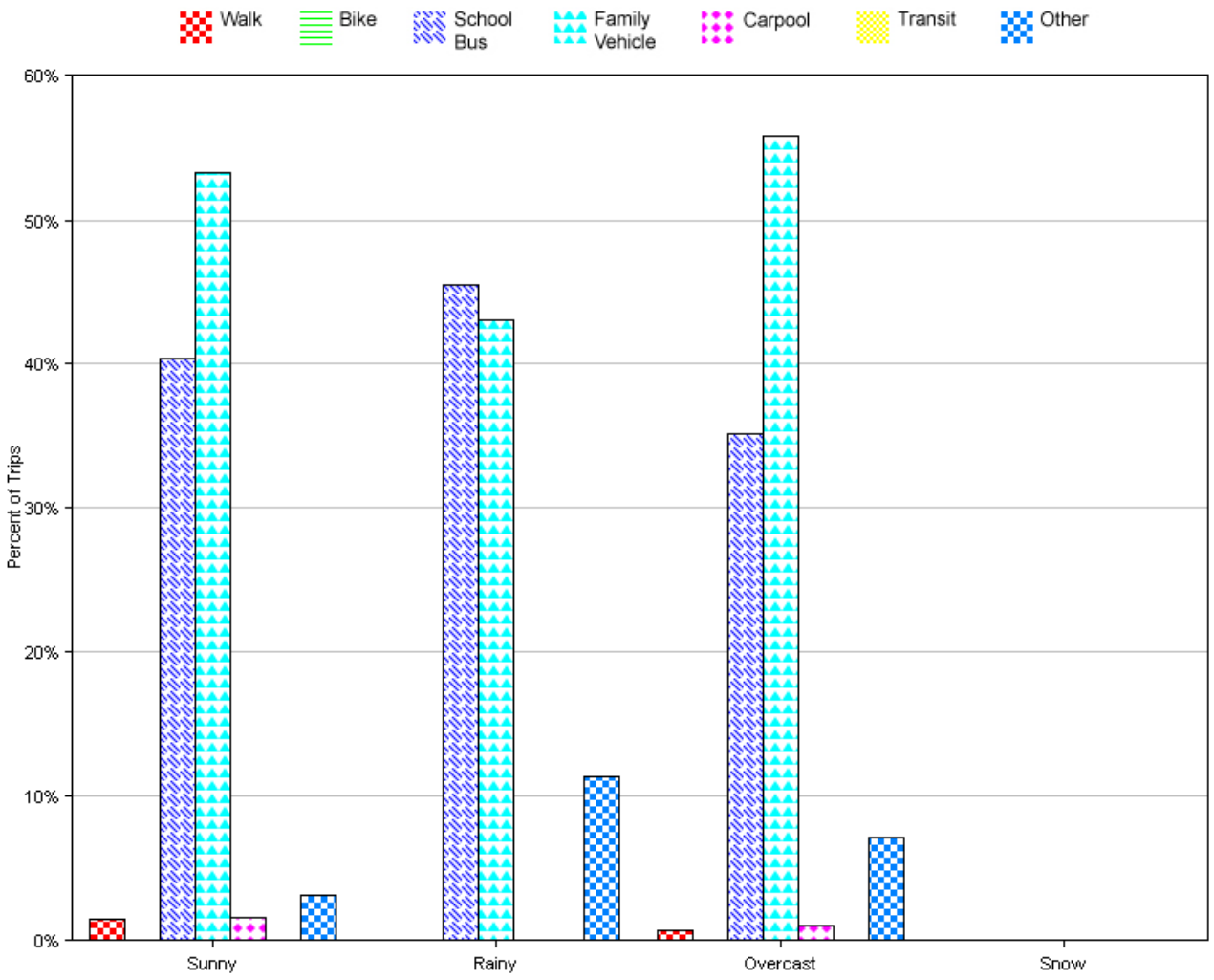


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	176	0.6%	0%	26%	70%	0.6%	0%	2%
Tuesday PM	148	1%	0%	48%	41%	0%	0%	9%
Wednesday AM	210	0.5%	0%	30%	67%	2%	0%	0%
Wednesday PM	182	4%	0%	50%	35%	1%	0%	10%
Thursday AM	216	0.5%	0%	33%	64%	2%	0%	0.9%
Thursday PM	187	0%	0%	51%	36%	1%	0%	12%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	604	1%	0%	40%	53%	2%	0%	3%
Rainy	123	0%	0%	46%	43%	0%	0%	11%
Overcast	392	0.8%	0%	35%	56%	1%	0%	7%
Snow	0	0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

John Lawrence Elementary School

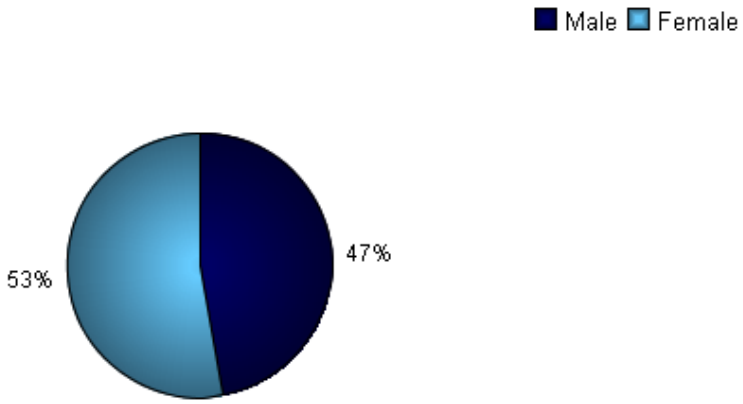
Parent Surveys and Student Tallies Summary Report

Parent Survey Summary

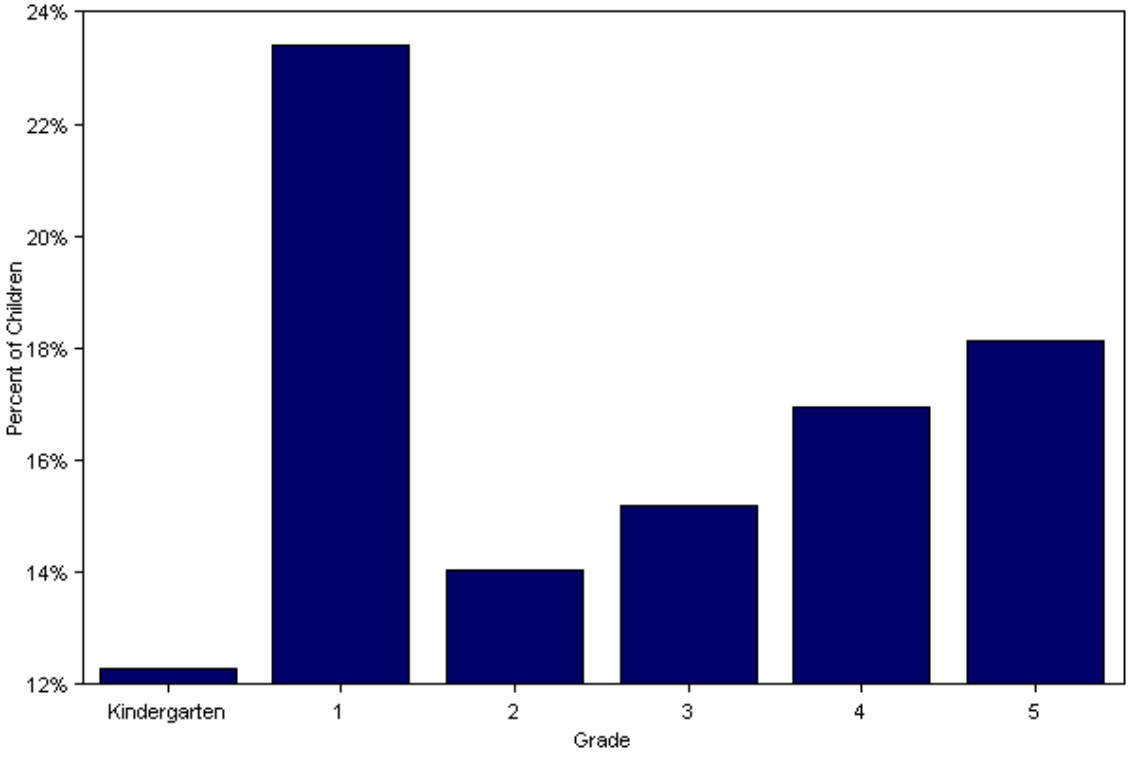
Program Name:	City of Archdale	**Month and Year Collected:**	March 2010
School Name:	John Lawrence Elementary	**Set ID:**	3499
School Enrollment:	550	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	550	**Number of Questionnaires Analyzed for Report:**	178
Number of Questionnaires Distributed:	550		

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

Sex of children for parents that provided information



Grade levels of children represented in survey

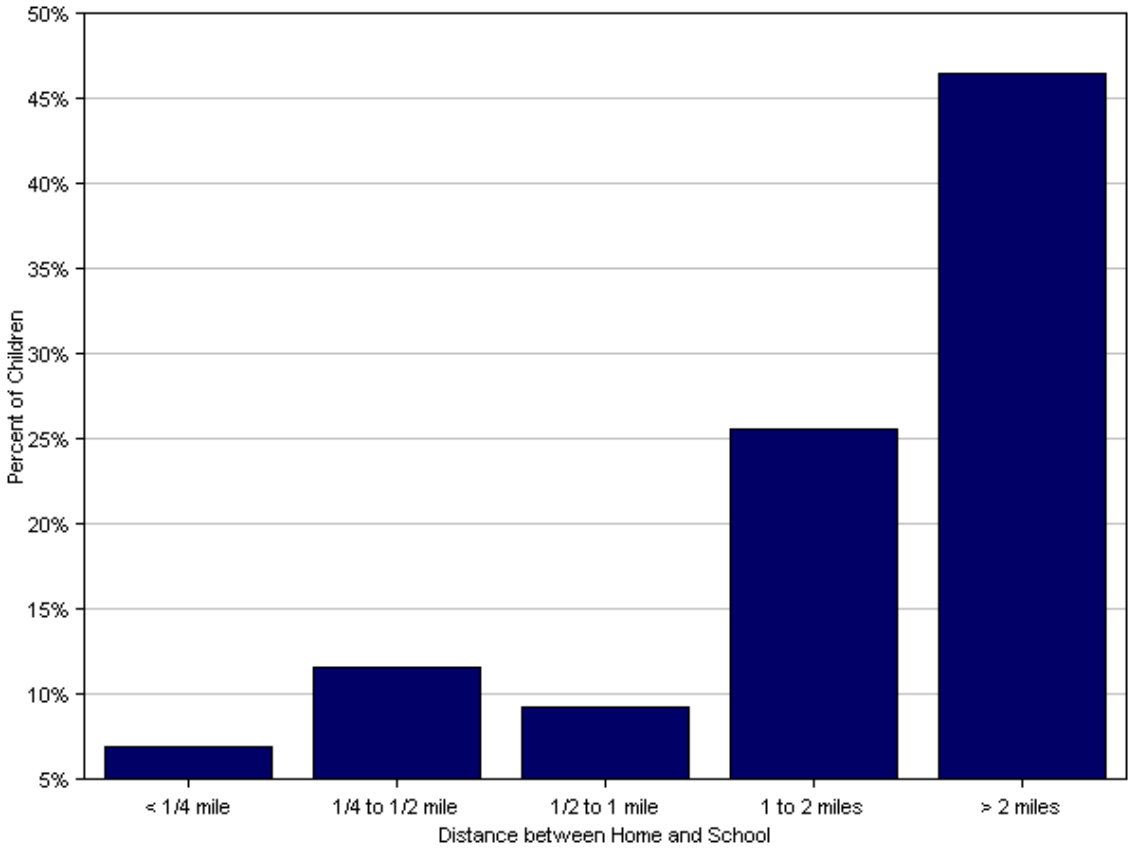


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	21	12%
1	40	23%
2	24	14%
3	26	15%
4	29	17%
5	31	18%

No response: 7
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

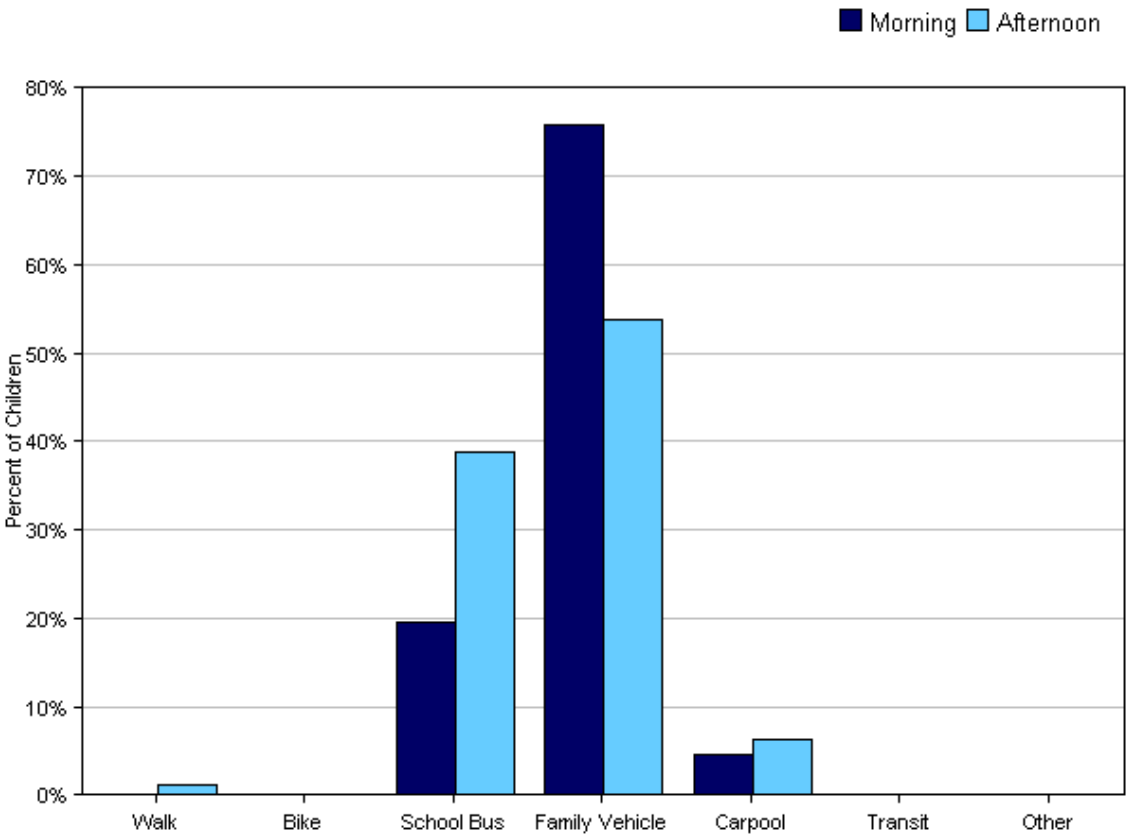


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	12	7%
1/4 mile up to 1/2 mile	20	12%
1/2 mile up to 1 mile	16	9%
1 mile up to 2 miles	44	26%
More than 2 miles	80	47%

Don't know or No response: 6
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

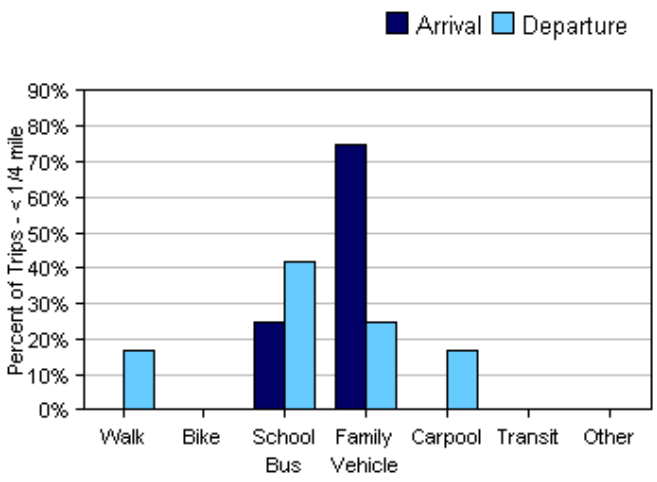


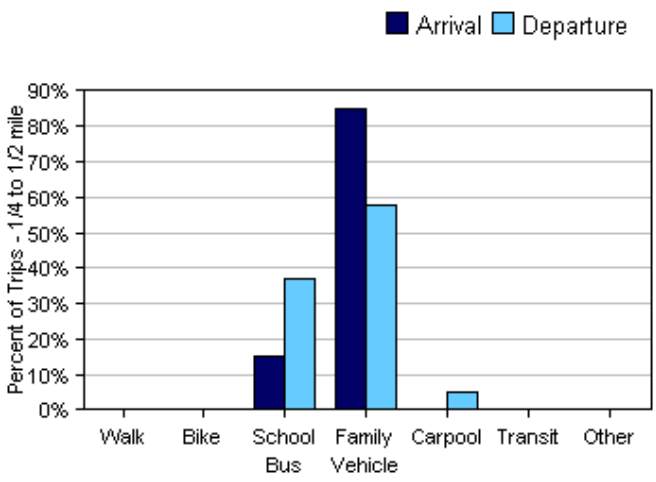
Typical mode of arrival at and departure from school

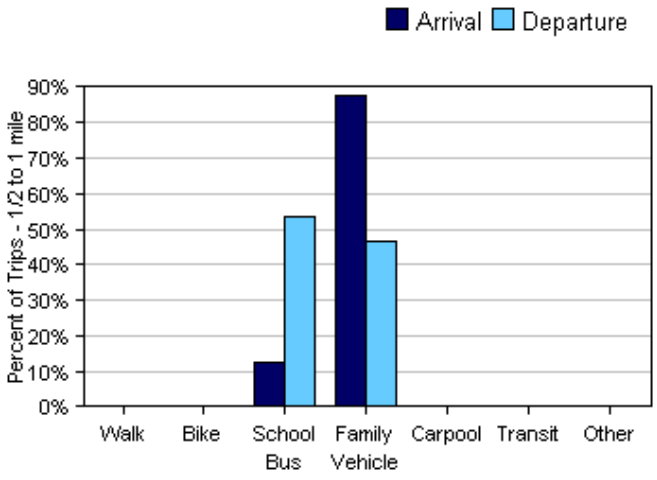
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	178	0%	0%	20%	76%	4%	0%	0%
Afternoon	175	1%	0%	39%	54%	6%	0%	0%

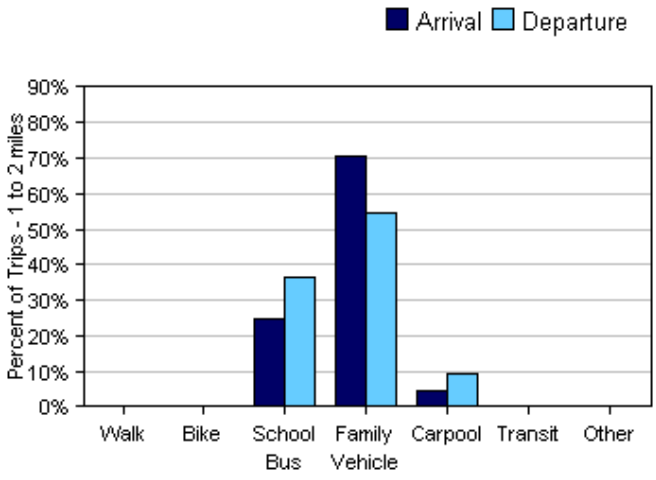
No Response Morning: 0
No Response Afternoon: 3
Percentages may not total 100% due to rounding.

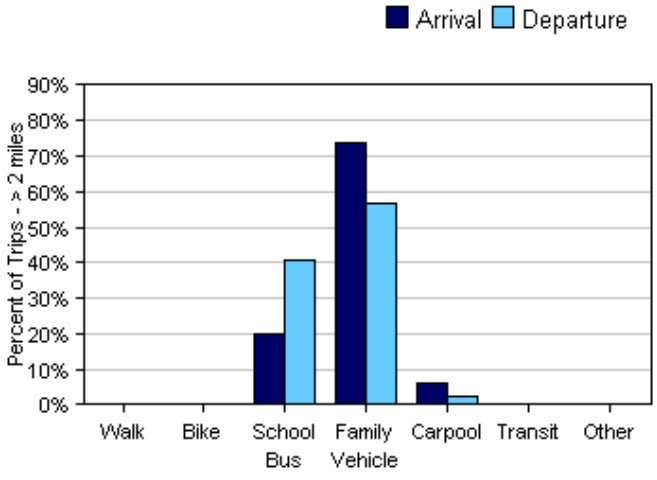
Typical mode of school arrival and departure by distance child lives from school











Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	12	0%	0%	25%	75%	0%	0%	0%
1/4 mile up to 1/2 mile	20	0%	0%	15%	85%	0%	0%	0%
1/2 mile up to 1 mile	16	0%	0%	13%	88%	0%	0%	0%
1 mile up to 2 miles	44	0%	0%	25%	70%	5%	0%	0%
More than 2 miles	80	0%	0%	20%	74%	6%	0%	0%

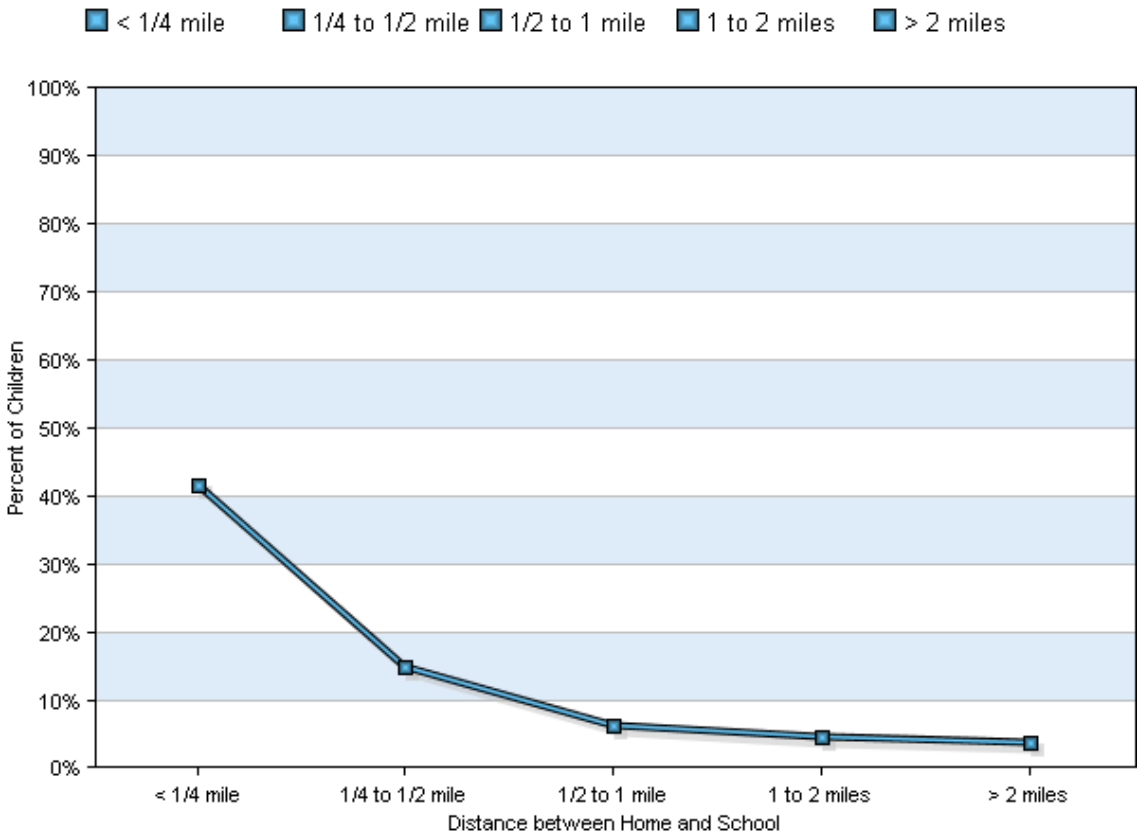
Don't know or No response: 6
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	12	17%	0%	42%	25%	17%	0%	0%
1/4 mile up to 1/2 mile	19	0%	0%	37%	58%	5%	0%	0%
1/2 mile up to 1 mile	15	0%	0%	53%	47%	0%	0%	0%
1 mile up to 2 miles	44	0%	0%	36%	55%	9%	0%	0%
More than 2 miles	79	0%	0%	41%	57%	3%	0%	0%

Don't know or No response: 9
Percentages may not total 100% due to rounding.

Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

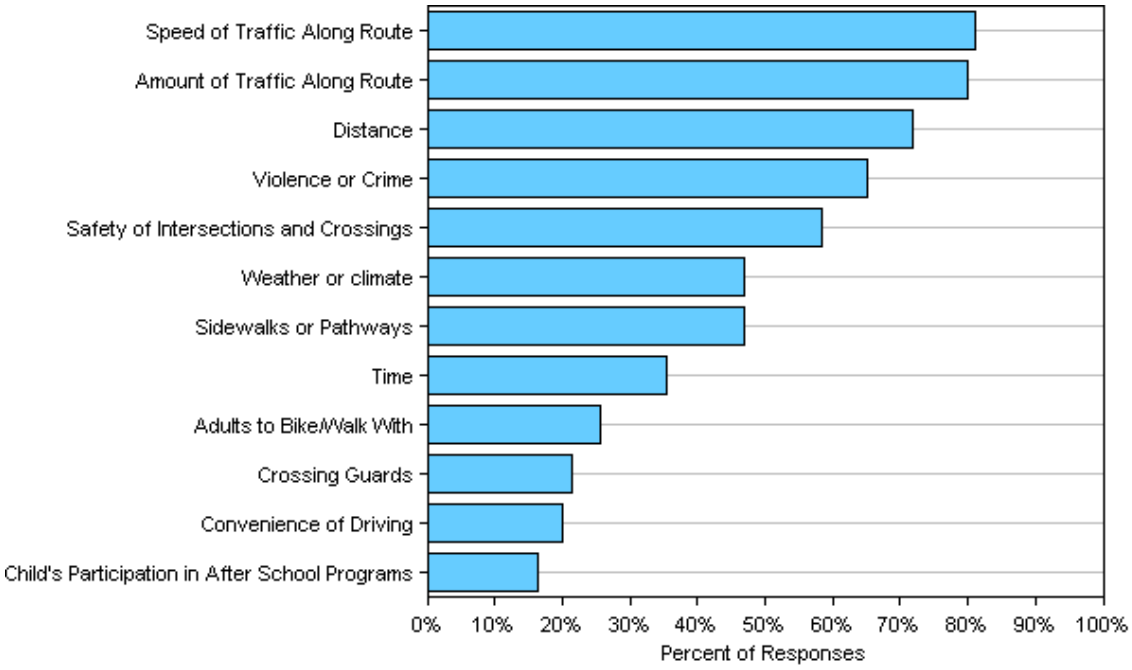


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

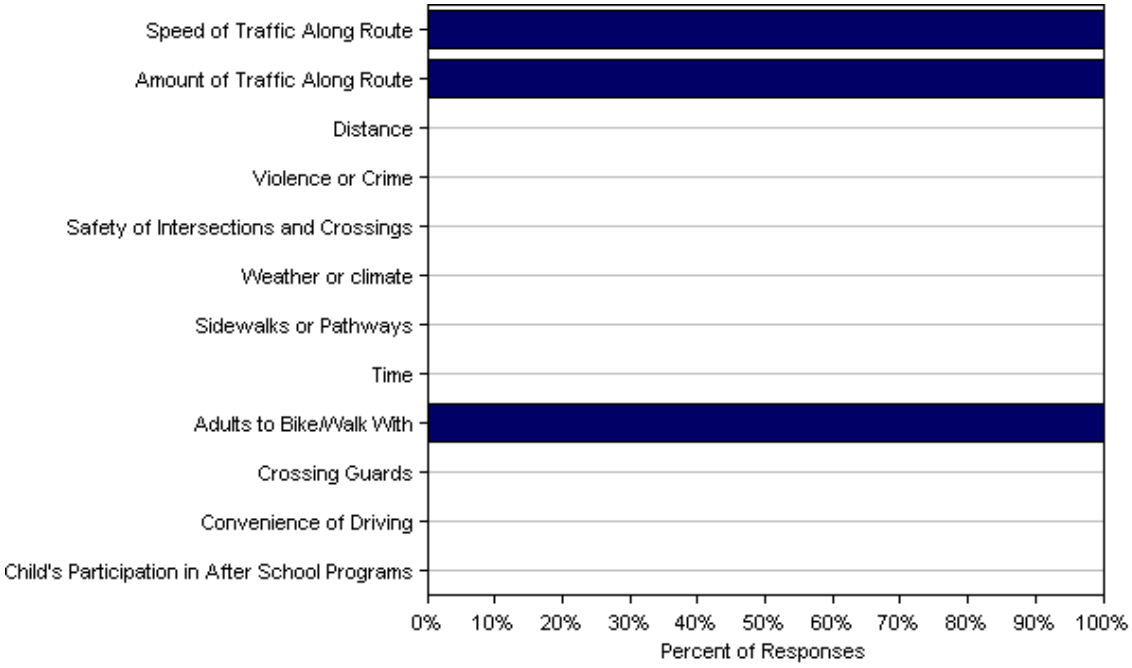
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	14	42%	15%	6%	5%	4%
No	157	58%	85%	94%	95%	96%

Don't know or No response: 7
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school



Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

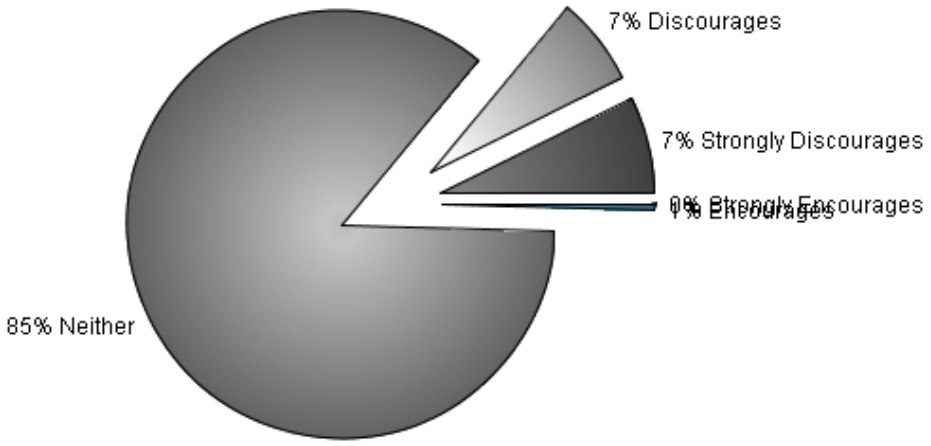


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

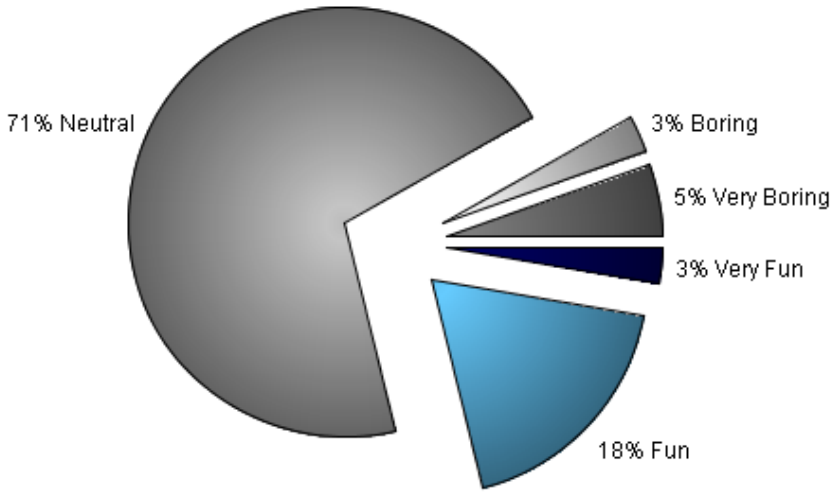
Issue	Child does not walk/bike to school	Child walks/bikes to school
Speed of Traffic Along Route	81%	100%
Amount of Traffic Along Route	80%	100%
Distance	72%	0%
Violence or Crime	65%	0%
Safety of Intersections and Crossings	59%	0%
Weather or climate	47%	0%
Sidewalks or Pathways	47%	0%
Time	35%	0%
Adults to Bike/Walk With	26%	100%
Crossing Guards	21%	0%
Convenience of Driving	20%	0%
Child's Participation in After School Programs	16%	0%
Number of Respondents per Category	**164**	**2**

No response: 12
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

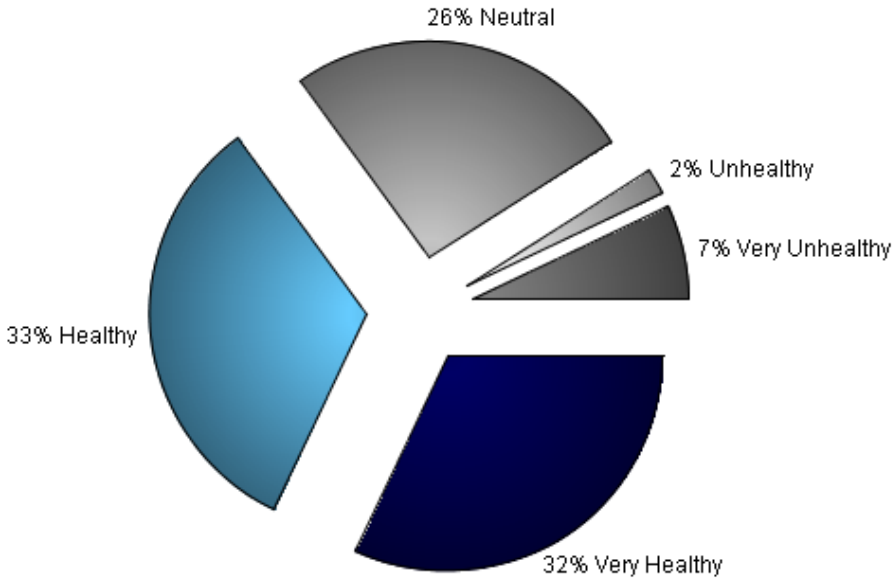
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



Parents' opinions about how much fun walking and biking to/from school is for their child



Parents' opinions about how healthy walking and biking to/from school is for their child



Comments Section

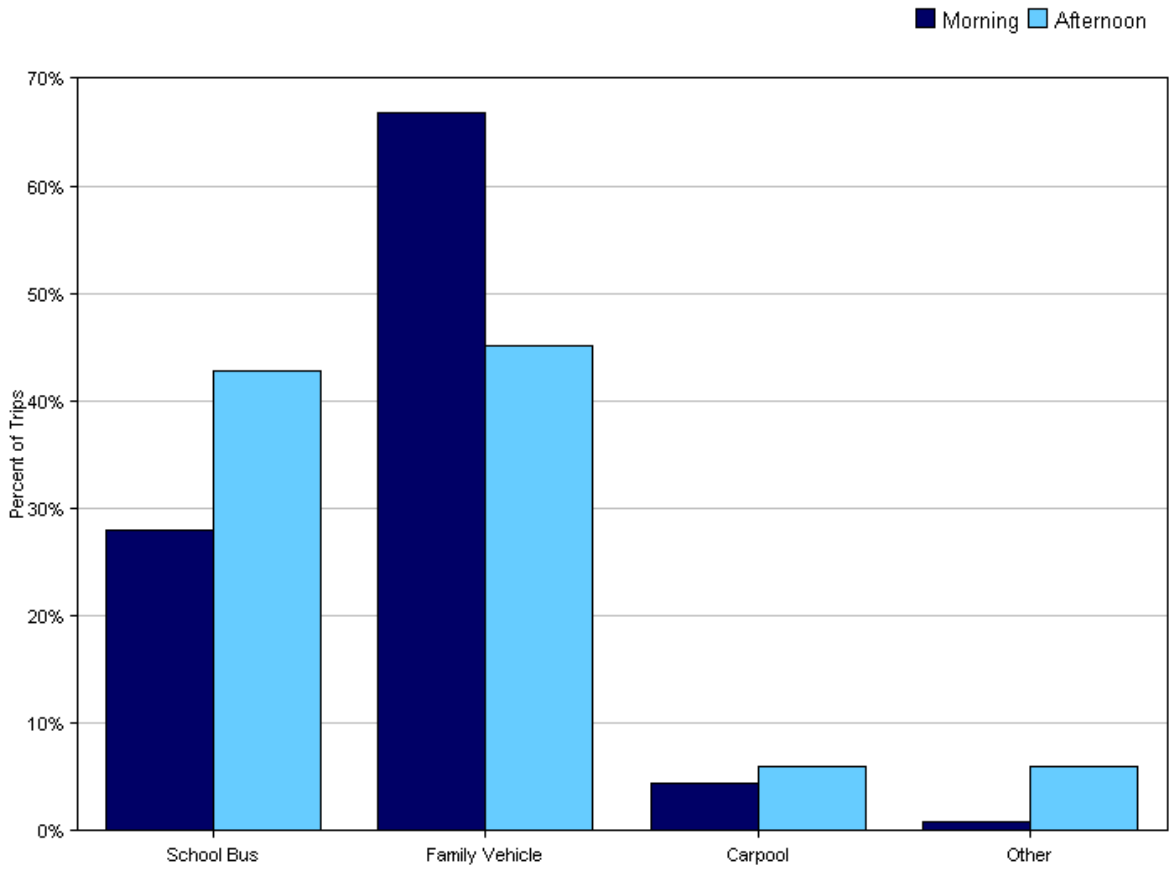
SurveyID	Comment
364985	I think parents are crazy to let there kid walk or bike to school because any thing could happen to the kids you see it on tv all the time and all that news is bad.
365005	People are crazy and so many kids are abducted each year.
365028	There needs to be someone out in front of the school directing traffic!
376077	my child is a girl I would not let walk anywhere without a adult
364934	Just too dangerous!
364948	Crossing guards would make it safer
364961	we live too far away for our children to walk.
364987	I don't think it will ever be safe enough for my child to walk or bike.
376065	would love to have sidewalks and safe crossings. would then walk to school with my child while he rides his bike.
376071	While it may be very healthy and fun for kids, it is not safe!
376101	We pay tuition and live too far away to ever consider this.
376125	SAFETY AND SECURITY IS NUMBER ONE. I WOULD AGREE THAT IT WOULD BE HEALTHY.
364977	I wouldn't feel comfortable letting my child walk ever based off of crime you hear about.
376070	I WOULD NEVER ALLOW MY CHILD TO WALK TO SCHOOL AT ANY AGE.
376073	WE WOULD WALK IF IT WERE SAFER TO DO SO.
376082	CHILDREN WOULD GET RAN OVER ON THESE ROADS! TERRIBLE TRAFFIC!
364926	half mile or 1 mile would be ok not from here.
364972	Thank you
364981	Unfortunately children aren't safe to even walk or bike in their own neighborhoods. Child predators are everywhere! I will never take the chance of letting something happen to my child. It's sad but true. Its a different world than when we went to school.
365021	we live close to school. I can drive him there easier.
376084	HEALTHY ACTIVITIES ARE GREAT BY SAFETY IS MORE IMPORTANT.
376093	MY CHILD WALKS HOME WITH PARENT TOO MUCH TRAFFIC TO WALK WITHOUT SUPERVISION
376112	TODAY IS DIFFERENT TOO MANY SEX OFFENDERS LURKING AROUND
376134	This a very dangerous suggestion! Are you not aware that crazy people watch for children walking alone?
376607	My child walks home with parent too much traffic to walk without supervision
376614	We need an extra turning lane into the school, also flashing lights
364975	I DO NOT AGREE WITH THIS AT ALL. I WILL NOT ALLOW THIS!
365015	TOO MUCH TRAFFIC DURING SCHOOL HOURS FOR ANY CHILD TO WALK!
376059	The road by our school is dangerous in a vehicle walking is out of the question.
376081	It is worth looking into but would require more supervision.
376152	Child is 10 years old, she will not be safe to walk or bike to school ever.
365026	The traffic around our school is not safe enough for anyone to walk or ride a bike.

365043	SURVEY IS NOT RELEVANT WHEN YOU LIVE FAR FROM SCHOOL
364980	Answer to #14 is for safety reasons.
376058	it is crazy to even consider this! Have you noticed all the violence and perverts. Regardless of safety or patrols they are still out there and can strike at anytime.
376158	Would not let her walk or ride bike no matter how close.
376067	IT IS NOT SAFE FOR ANY CHILD. CARS AND MEAN PEOPLE.
376097	Answer to #14 is due to safety
364924	No! No! No! Are you Crazy! Or just Stupid!
365029	Would not ever let my child walk or ride bike to school to dangerous!
376056	my child is late in THE MORNING CAUSE LINE IS ALWAYS LONG AND I LEAVE EARLY SO SHE WOULD BE LATE
376121	In this day and time you can't let your children be alone.
376153	K-8 should never be ask to walk or bike to school!! (dead is not healthy)
364986	TOO MANY CHILD PREDATORS TODAY
376610	I like to watch my son go inside school & walk out of school "safely."

Tally Report

Program Name:	City of Archdale	**Month and Year Collected:**	March 2010
School Name:	John Lawrence Elementary	**Set ID:**	4627
School Enrollment:	550	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	550	**Number of Classrooms Included in Report:**	13
Number of Classrooms in School:	23		

Morning and Afternoon Travel Mode Comparison

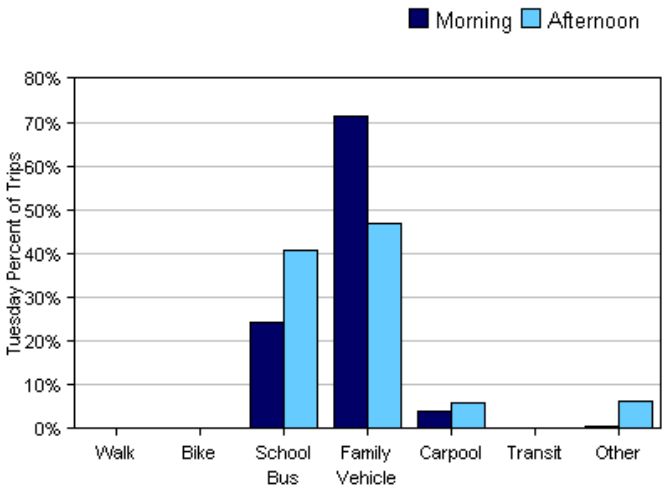


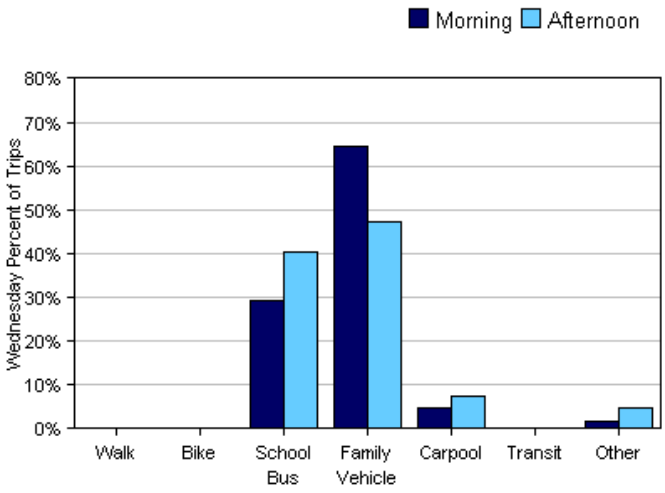
Morning and Afternoon Travel Mode Comparison

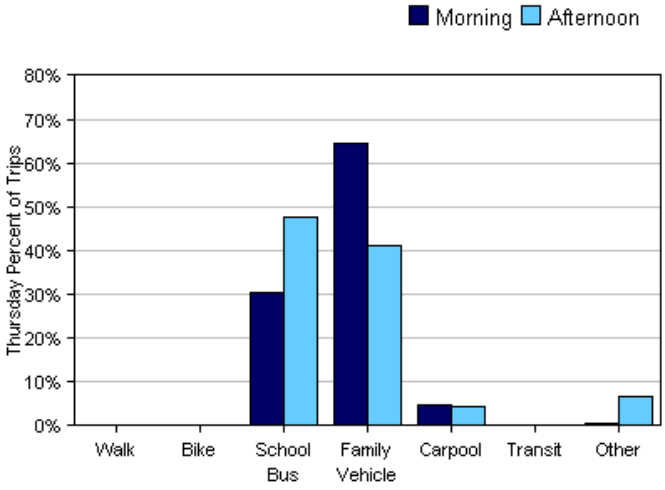
	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	755	0%	0%	28%	67%	5%	0%	0.8%
Afternoon	742	0%	0%	43%	45%	6%	0%	6%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day





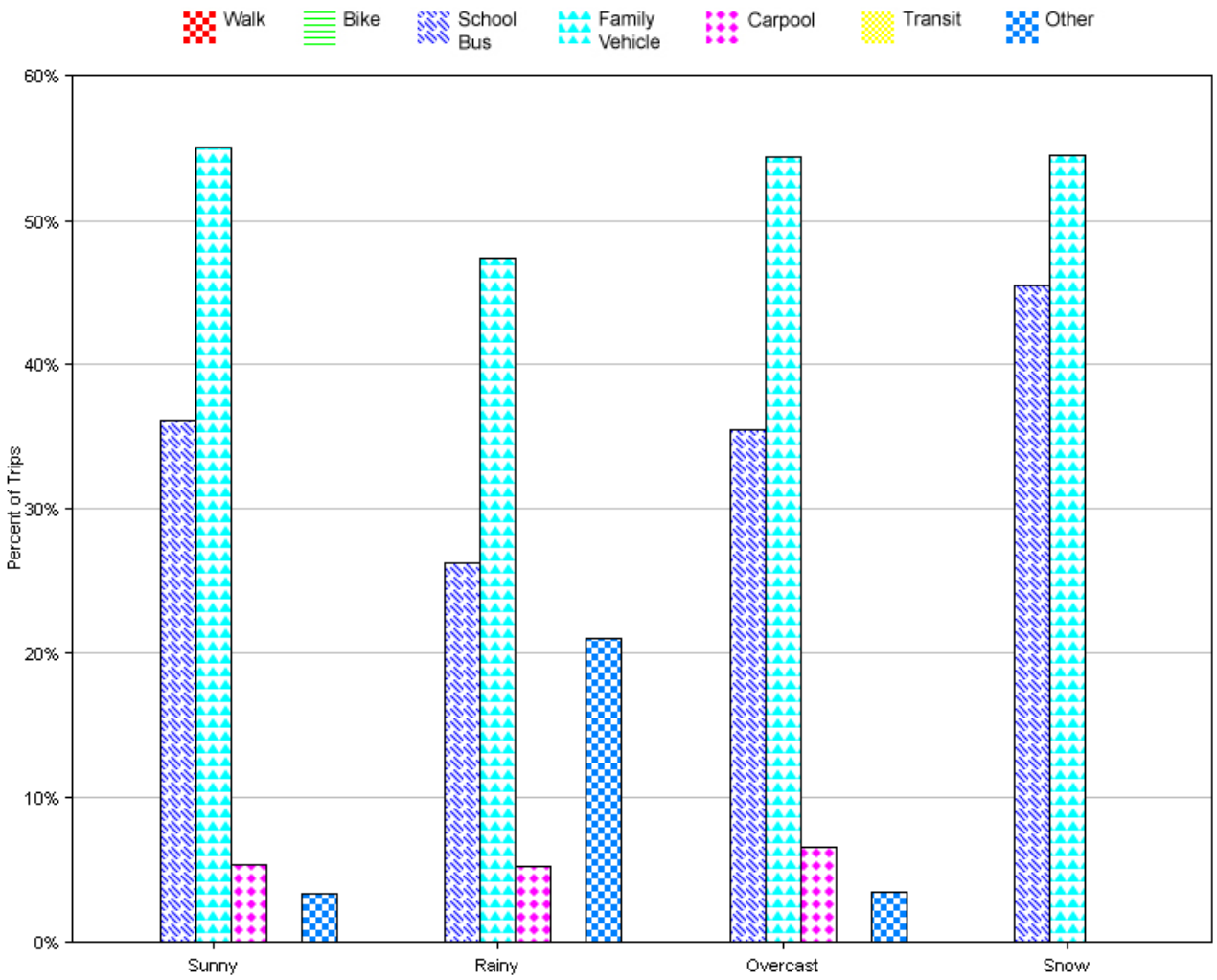


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	258	0%	0%	24%	71%	4%	0%	0.4%
Tuesday PM	246	0%	0%	41%	47%	6%	0%	7%
Wednesday AM	253	0%	0%	29%	64%	5%	0%	2%
Wednesday PM	253	0%	0%	40%	47%	8%	0%	5%
Thursday AM	244	0%	0%	30%	64%	5%	0%	0.4%
Thursday PM	243	0%	0%	48%	41%	5%	0%	7%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	886	0%	0%	36%	55%	5%	0%	3%
Rainy	19	0%	0%	26%	47%	5%	0%	21%
Overcast	456	0%	0%	36%	54%	7%	0%	4%
Snow	22	0%	0%	45%	55%	0%	0%	0%

Percentages may not total 100% due to rounding.

Trindale Elementary School

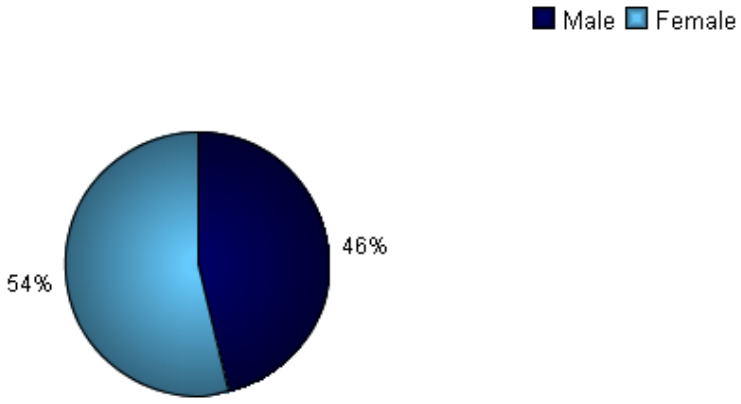
Parent Surveys and Student Tallies Summary Report

Parent Survey Summary

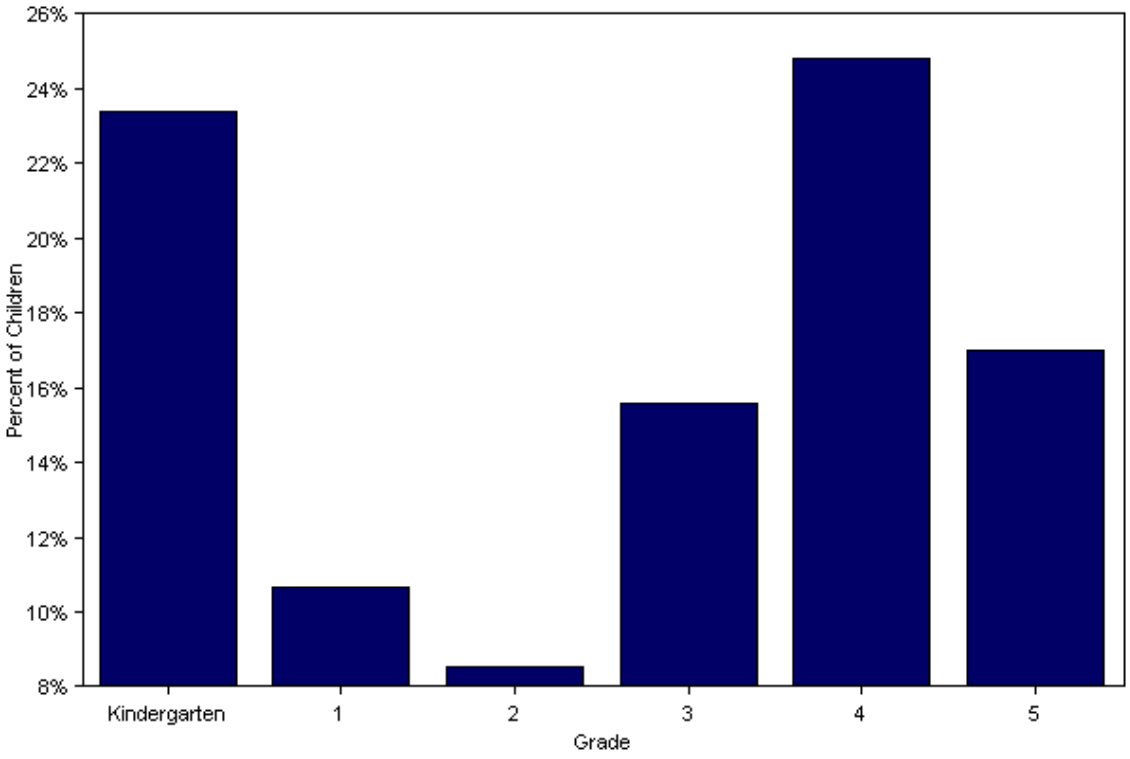
Program Name:	City of Archdale	**Month and Year Collected:**	January 2010
School Name:	Trindale Elementary School	**Set ID:**	3387
School Enrollment:	390	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	390	**Number of Questionnaires Analyzed for Report:**	144
Number of Questionnaires Distributed:	390		

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

Sex of children for parents that provided information



Grade levels of children represented in survey

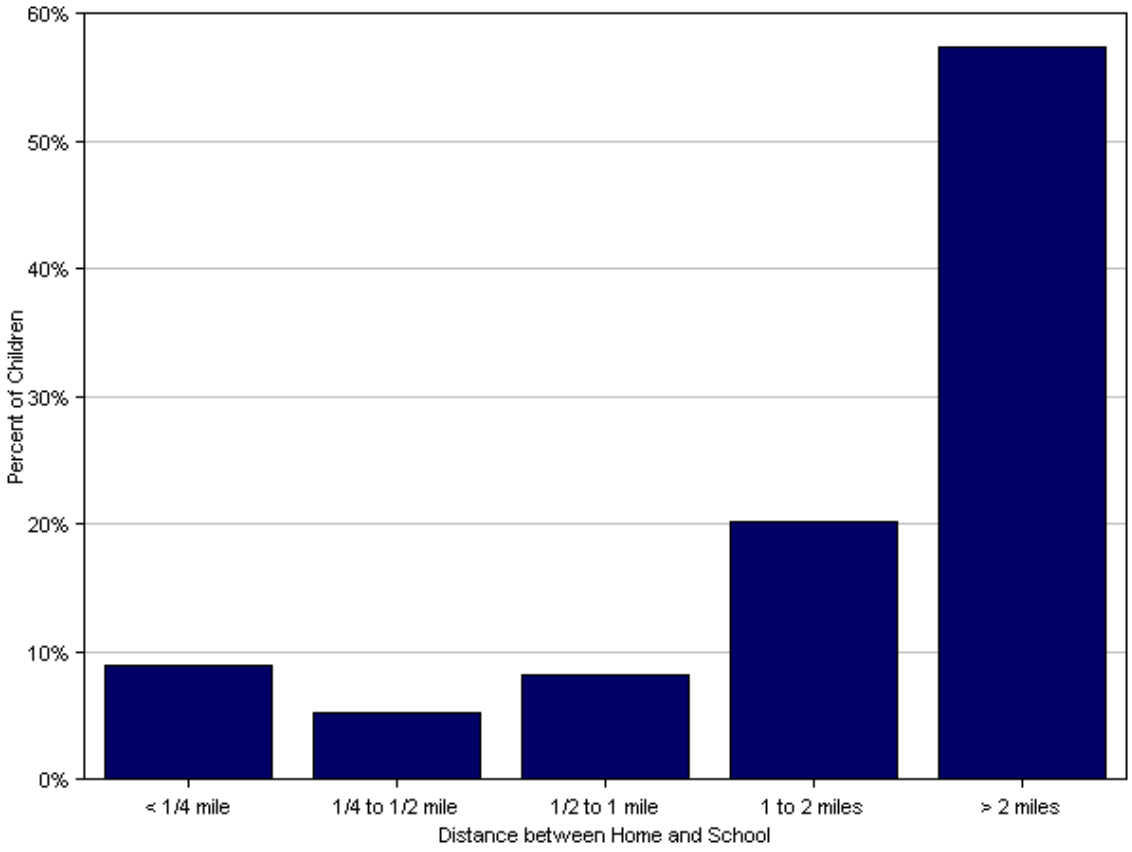


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	33	23%
1	15	11%
2	12	9%
3	22	16%
4	35	25%
5	24	17%

No response: 3
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

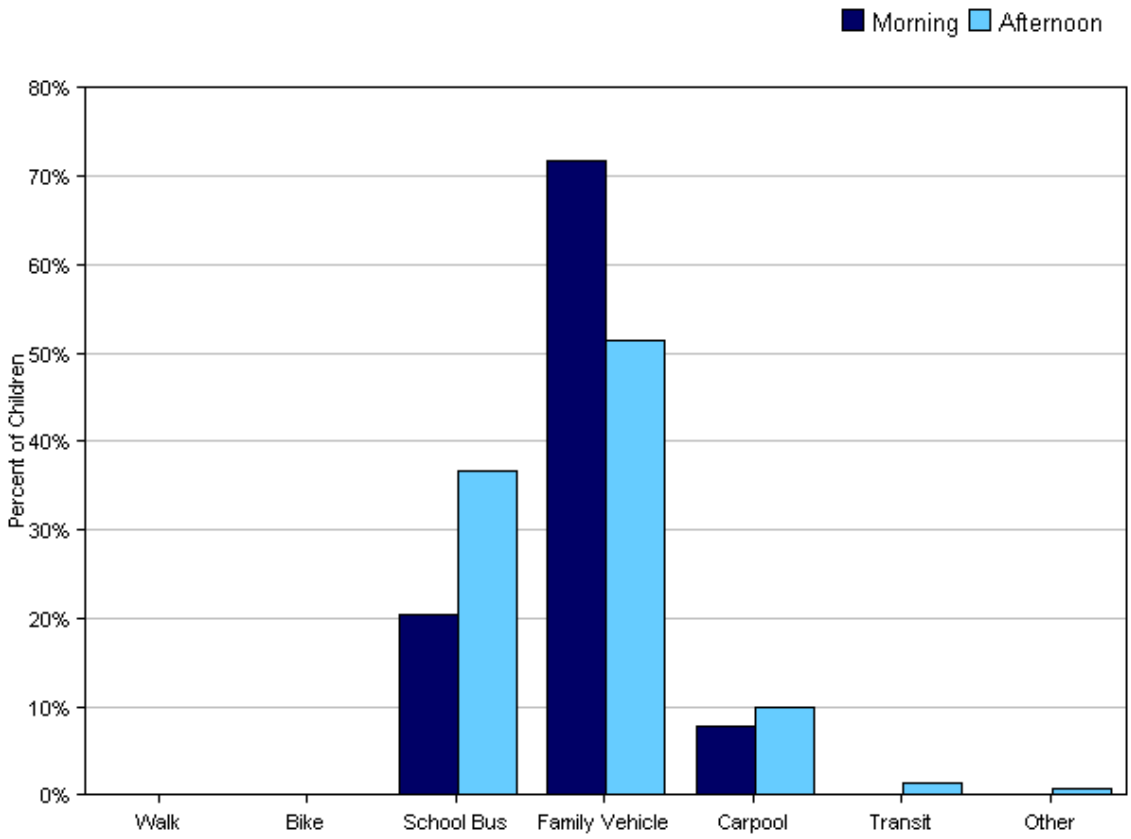


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	12	9%
1/4 mile up to 1/2 mile	7	5%
1/2 mile up to 1 mile	11	8%
1 mile up to 2 miles	27	20%
More than 2 miles	77	57%

Don't know or No response: 10
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

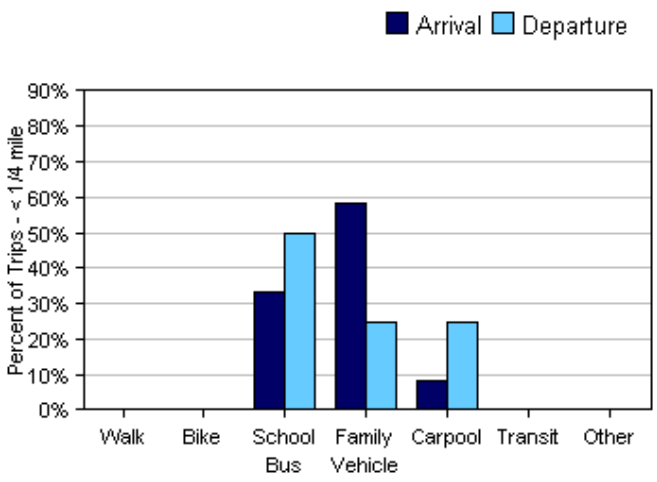


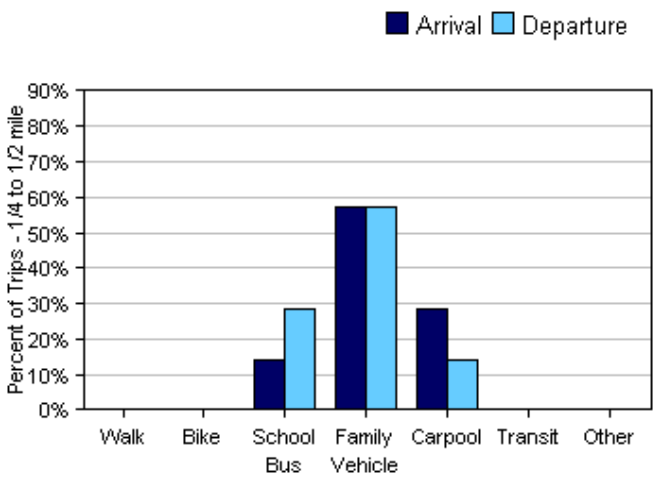
Typical mode of arrival at and departure from school

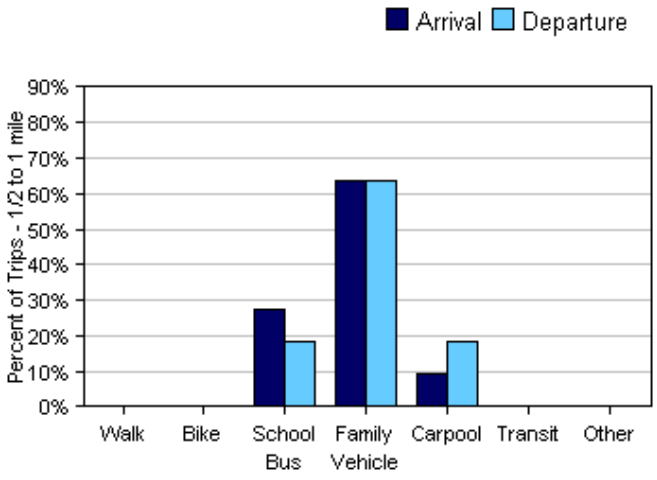
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	142	0%	0%	20%	72%	8%	0%	0%
Afternoon	142	0%	0%	37%	51%	10%	1%	0.7%

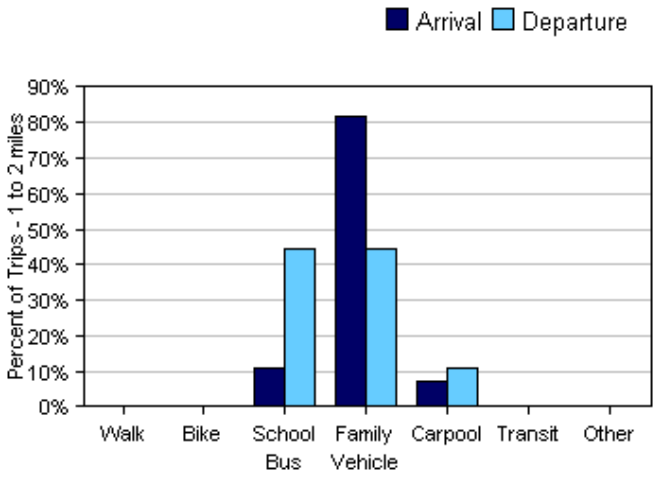
No Response Morning: 2
No Response Afternoon: 2
Percentages may not total 100% due to rounding.

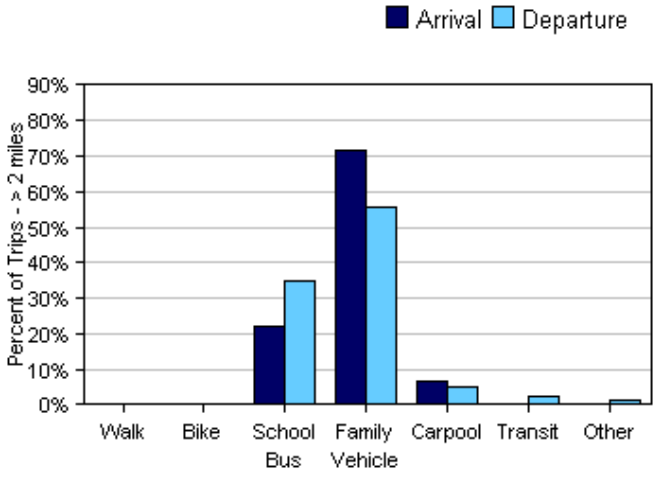
Typical mode of school arrival and departure by distance child lives from school











Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	12	0%	0%	33%	58%	8%	0%	0%
1/4 mile up to 1/2 mile	7	0%	0%	14%	57%	29%	0%	0%
1/2 mile up to 1 mile	11	0%	0%	27%	64%	9%	0%	0%
1 mile up to 2 miles	27	0%	0%	11%	81%	7%	0%	0%
More than 2 miles	77	0%	0%	22%	71%	6%	0%	0%

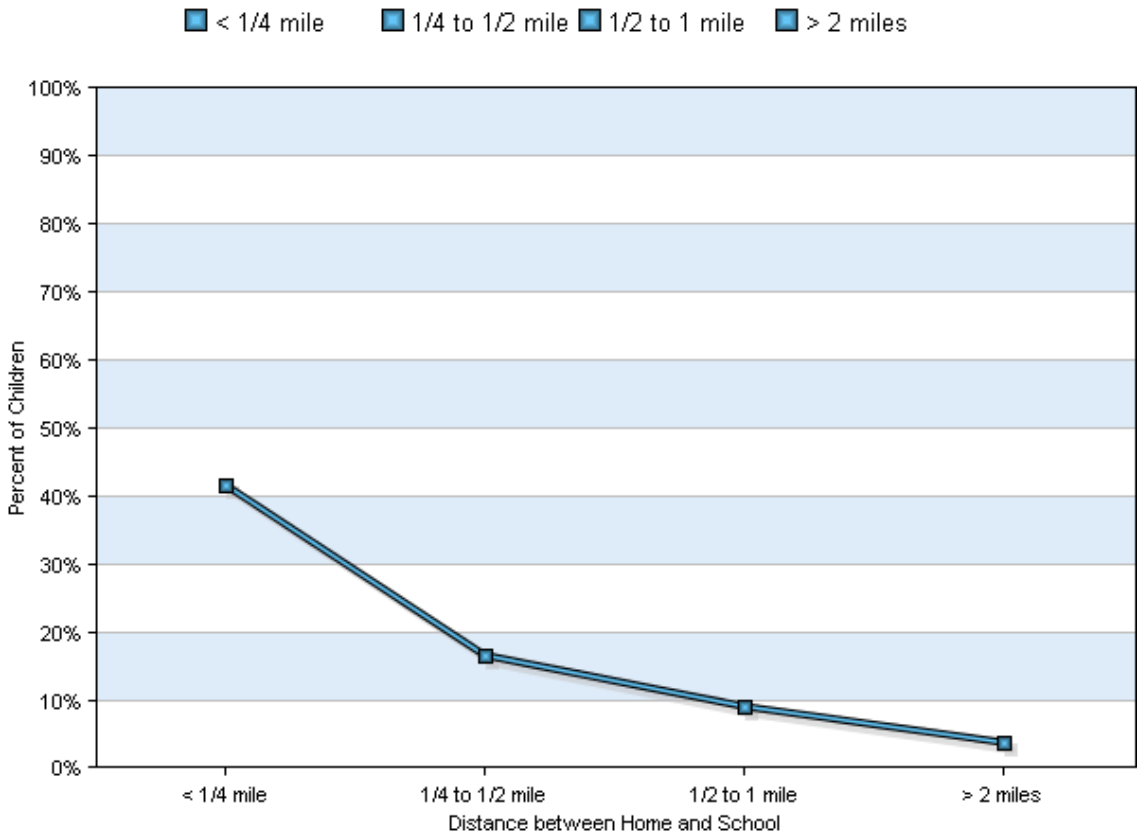
Don't know or No response: 10
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	12	0%	0%	50%	25%	25%	0%	0%
1/4 mile up to 1/2 mile	7	0%	0%	29%	57%	14%	0%	0%
1/2 mile up to 1 mile	11	0%	0%	18%	64%	18%	0%	0%
1 mile up to 2 miles	27	0%	0%	44%	44%	11%	0%	0%
More than 2 miles	77	0%	0%	35%	56%	5%	3%	1%

Don't know or No response: 10
Percentages may not total 100% due to rounding.

Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

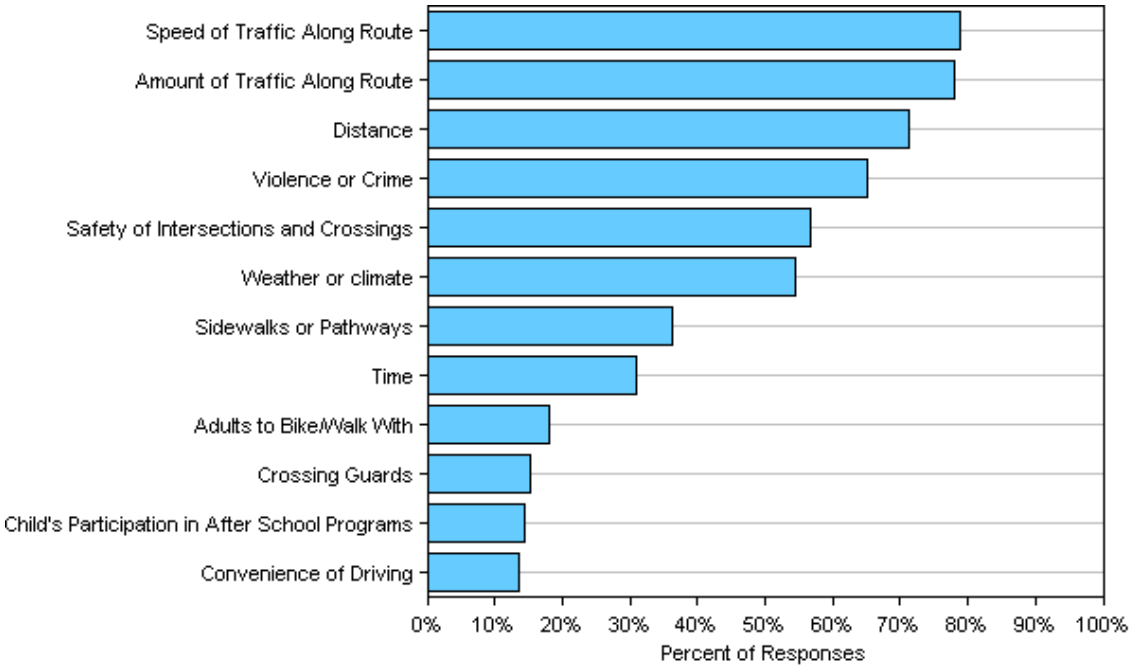


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

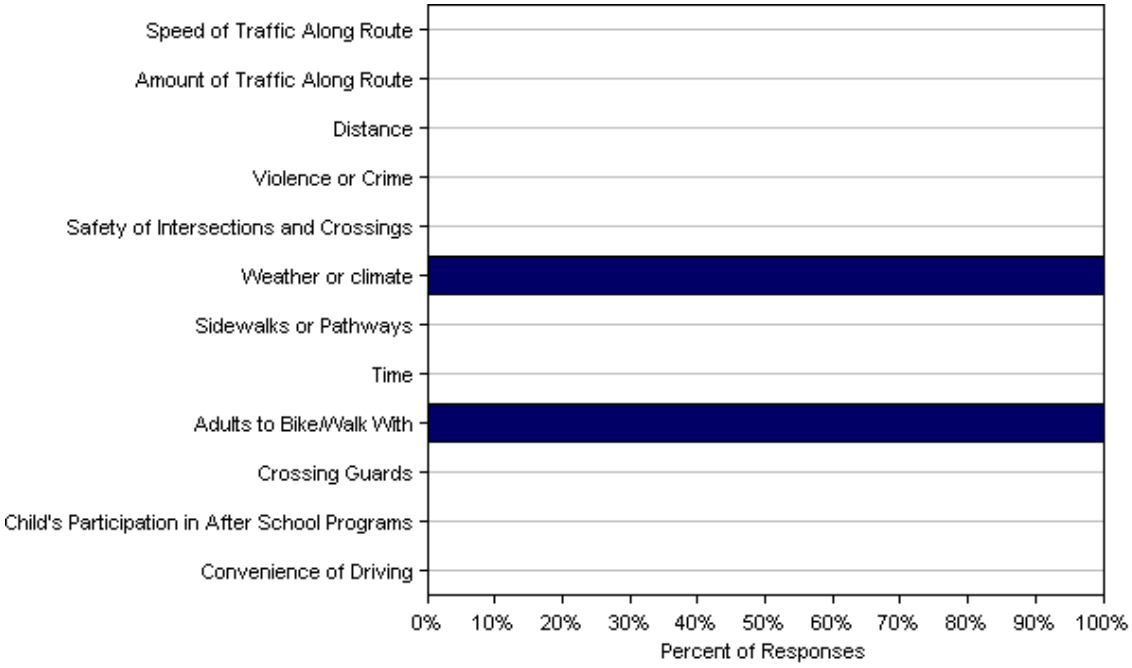
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	10	42%	17%	9%	0%	4%
No	123	58%	83%	91%	100%	96%

Don't know or No response: 11
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school



Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

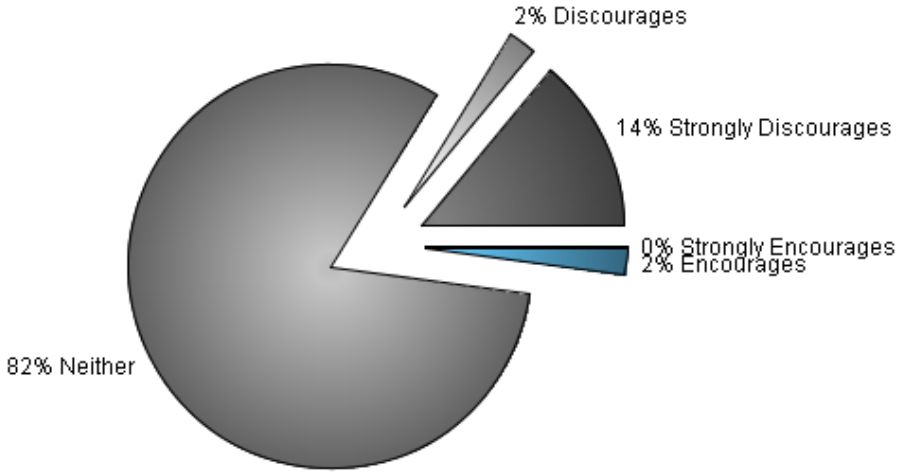


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

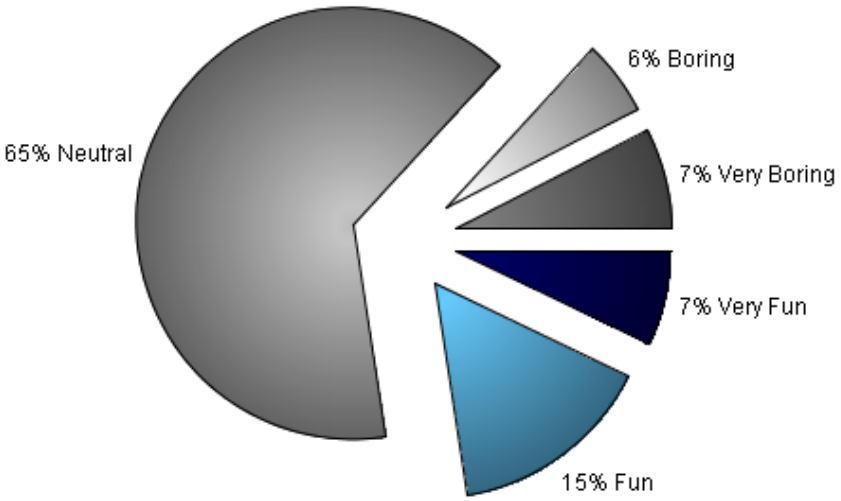
Issue	Child does not walk/bike to school	Child walks/bikes to school
Speed of Traffic Along Route	79%	0%
Amount of Traffic Along Route	78%	0%
Distance	71%	0%
Violence or Crime	65%	0%
Safety of Intersections and Crossings	57%	0%
Weather or climate	55%	100%
Sidewalks or Pathways	36%	0%
Time	31%	0%
Adults to Bike/Walk With	18%	100%
Crossing Guards	15%	0%
Child's Participation in After School Programs	14%	0%
Convenience of Driving	14%	0%
Number of Respondents per Category	**132**	**1**

No response: 11
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

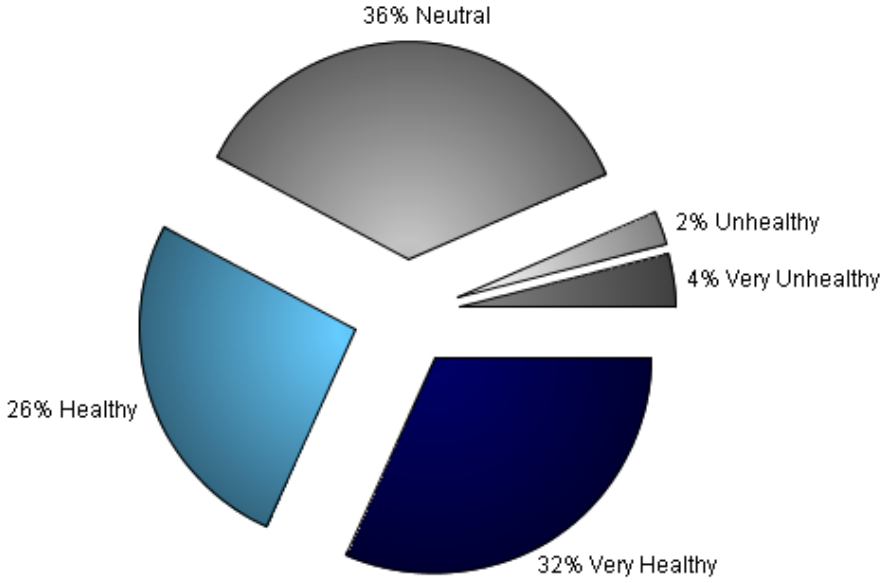
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



Parents' opinions about how much fun walking and biking to/from school is for their child



Parents' opinions about how healthy walking and biking to/from school is for their child



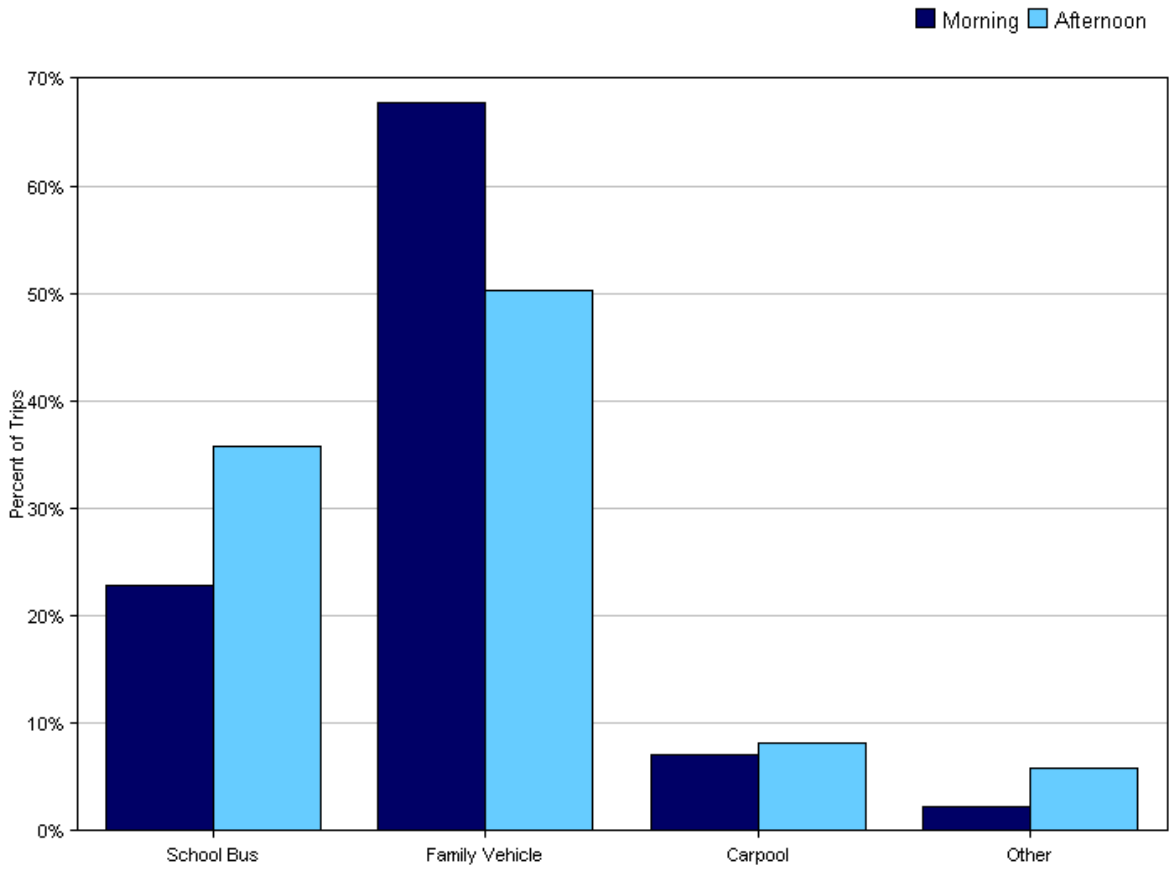
Comments Section

SurveyID	Comment
351560	#8. w/parent escourt
351566	my child is not in normal school distric she is in pre k program
351609	My child will walk or ride to school next year.
351615	If prayer was in school we may have a safer place to walk.
351610	We do not live in an area convenient to walk or bike to school.
351630	What is the purpose? to save fuel for the school?!
352066	If there were sidewalks down archdale rd and balfour I would also bike to work.
352057	To scared to even let children of this age to ride the bus at a bus stop.
351497	If more kids walked to atms from my subdivision, we would, can't walk alone
352052	I feel like it would be unsafe, due to violence and crime in the world.
351587	I feel uncomfortable not turning my child over to a school official.
351448	"If we lived close I might be ok with walking. Less then 1/4 mile."
351607	Not safe for children to walk or bike to school.
351524	too dangerous for children to walk home from school.
351618	This day and age I do not feel the world is safe enough.
351472	"This survey has no effect on us"
351580	#14-very unhealthy, becuase of safety -the school system would be crazy to encourage walking or biking.
351612	I would not allow my child to walk to school for fear of what could happen
351526	If I start to give my opinion on anything I won't stop so I'm assuming it's better left unsaid. Please don't give Macie silent lunch for her mother not participating. Thx! Kim
351456	leave for home:transit= after school van
352054	Riding bike or walking to school is not safe at any time or age.
352075	We learn that it is very healthy and great exercise to walk, but with other family members not alone.
351601	Didn't know how to answer #13, 14 because I wouldn't let him walk.

Tally Report

Program Name:	City of Archdale	**Month and Year Collected:**	February 2010
School Name:	Trindale Elementary School	**Set ID:**	3895
School Enrollment:	390	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	390	**Number of Classrooms Included in Report:**	10
Number of Classrooms in School:	19		

Morning and Afternoon Travel Mode Comparison

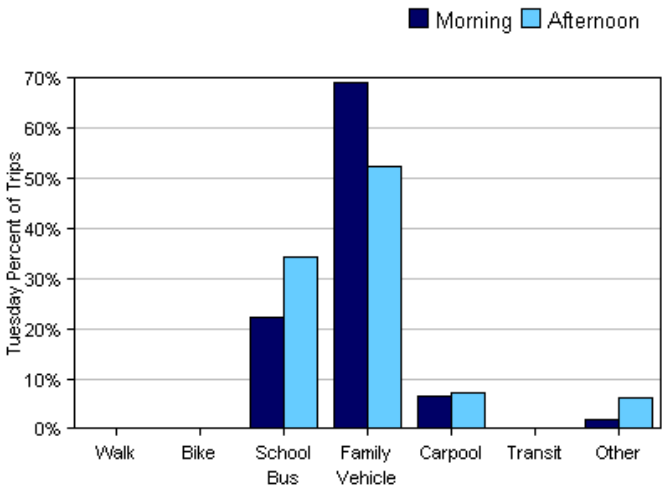


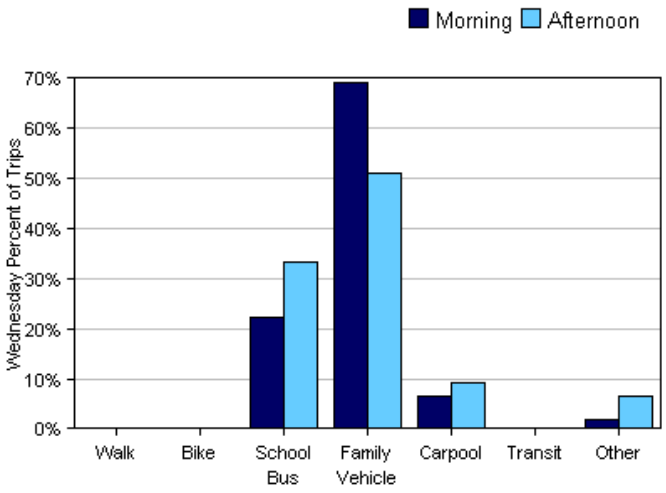
Morning and Afternoon Travel Mode Comparison

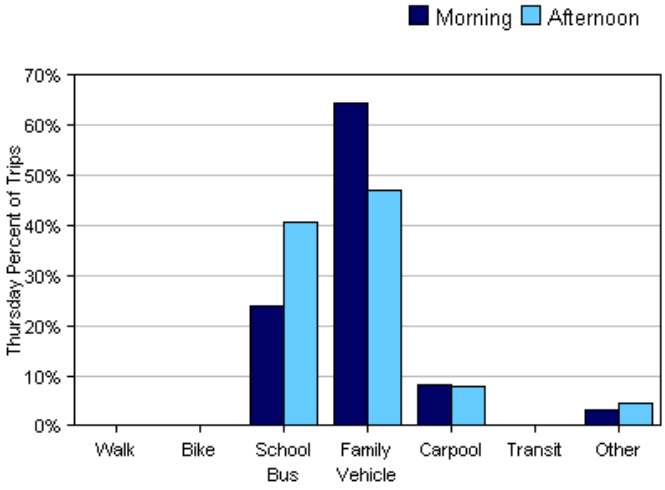
	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	612	0%	0%	23%	68%	7%	0%	2%
Afternoon	604	0%	0%	36%	50%	8%	0%	6%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day





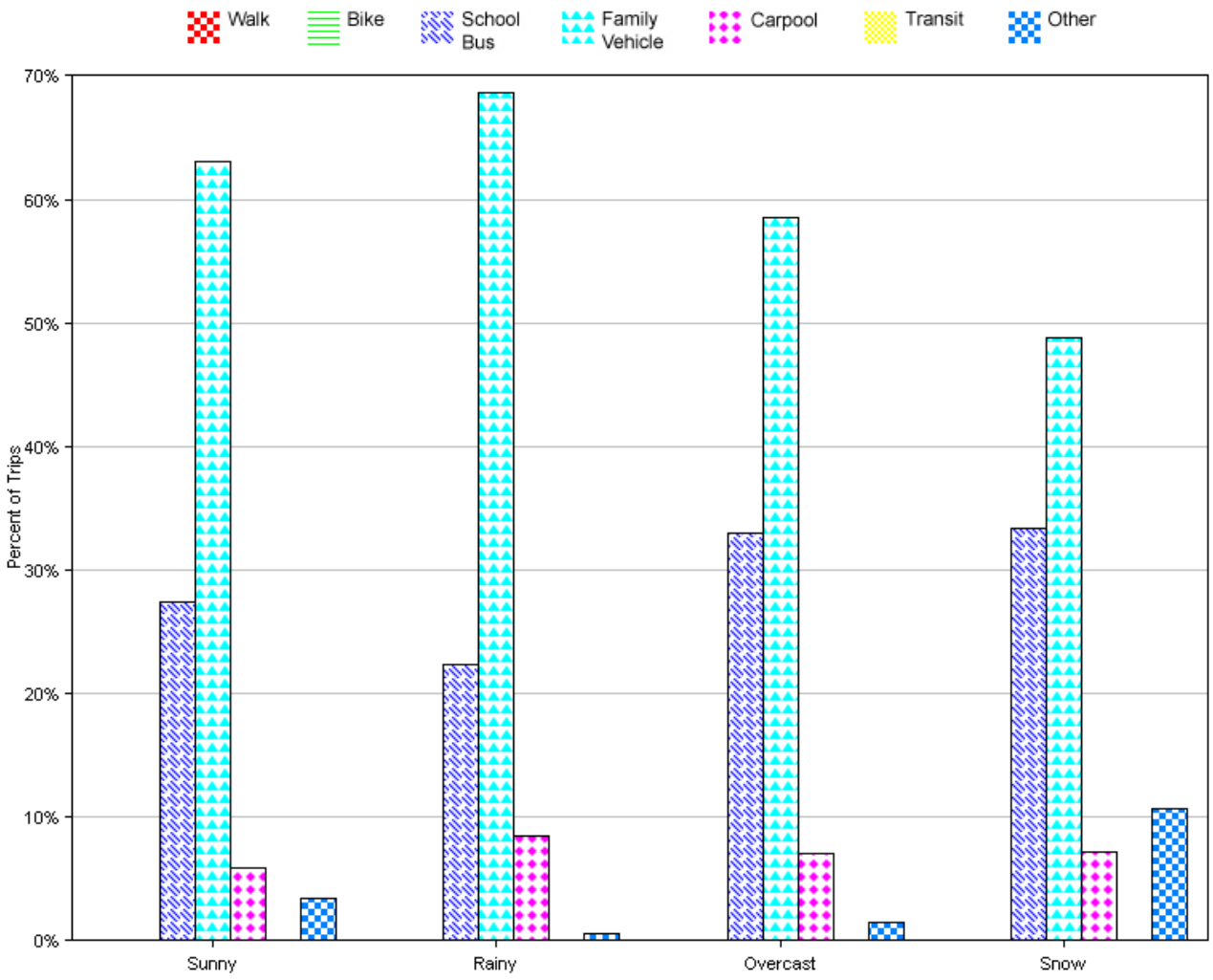


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	214	0%	0%	22%	69%	7%	0%	2%
Tuesday PM	210	0%	0%	34%	52%	7%	0%	6%
Wednesday AM	215	0%	0%	22%	69%	7%	0%	2%
Wednesday PM	217	0%	0%	33%	51%	9%	0%	6%
Thursday AM	183	0%	0%	24%	64%	8%	0%	3%
Thursday PM	177	0%	0%	41%	47%	8%	0%	5%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	404	0%	0%	27%	63%	6%	0%	3%
Rainy	188	0%	0%	22%	69%	9%	0%	0.5%
Overcast	328	0%	0%	33%	59%	7%	0%	2%
Snow	84	0%	0%	33%	49%	7%	0%	11%

Percentages may not total 100% due to rounding.

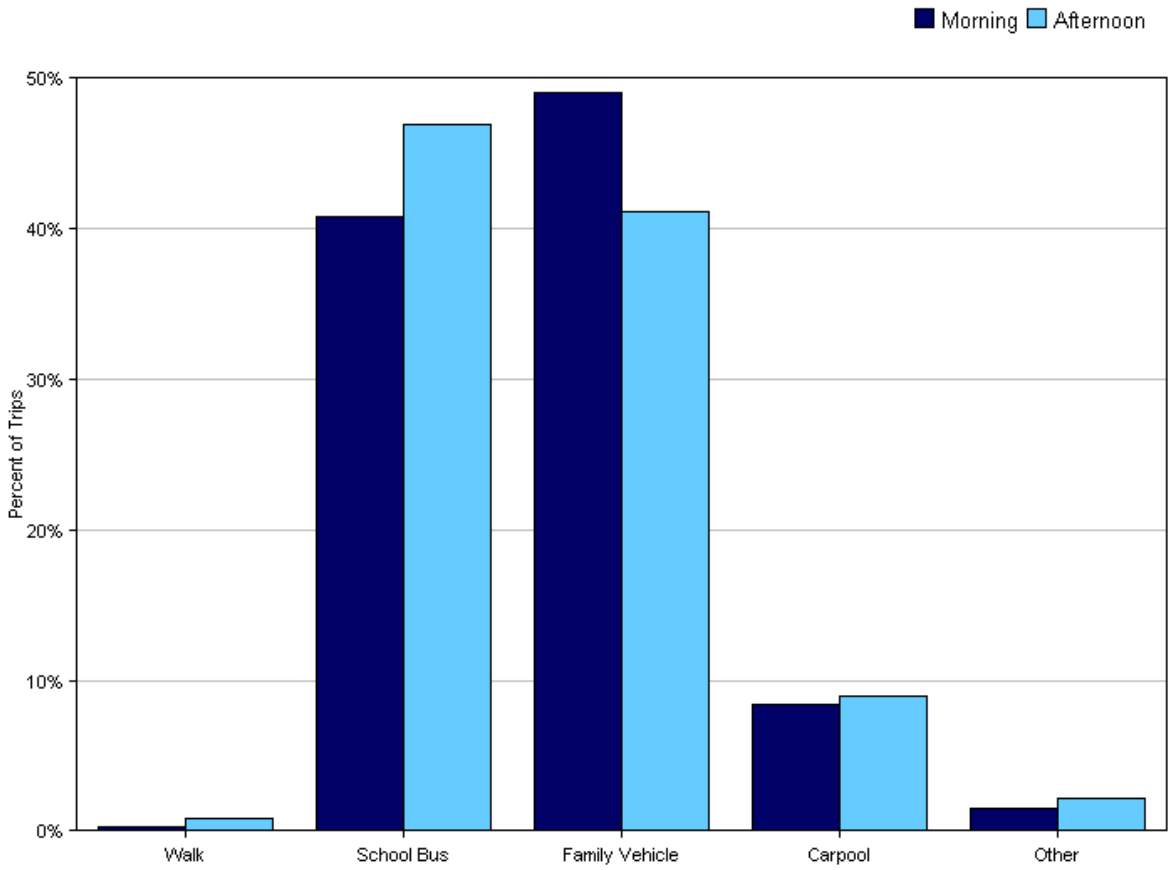
Archdale Trinity Middle School

Parent Surveys and Student Tallies Summary Report

Tally Report

Program Name:	City of Archdale	**Month and Year Collected:**	February 2010
School Name:	Archdale Trinity Middle School	**Set ID:**	4626
School Enrollment:	816	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	816	**Number of Classrooms Included in Report:**	13
Number of Classrooms in School:	30		

Morning and Afternoon Travel Mode Comparison

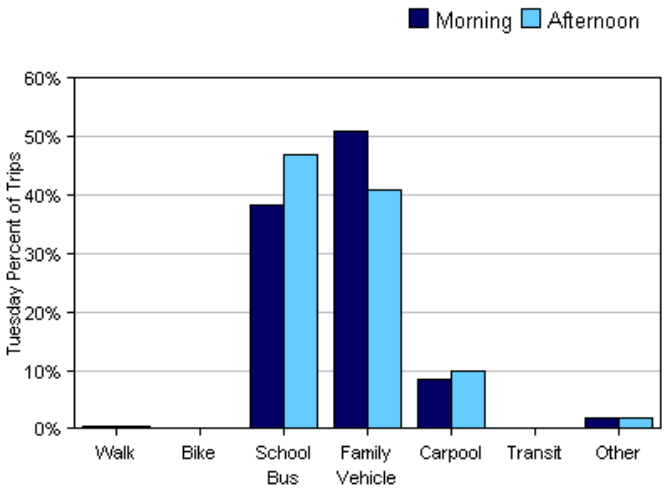


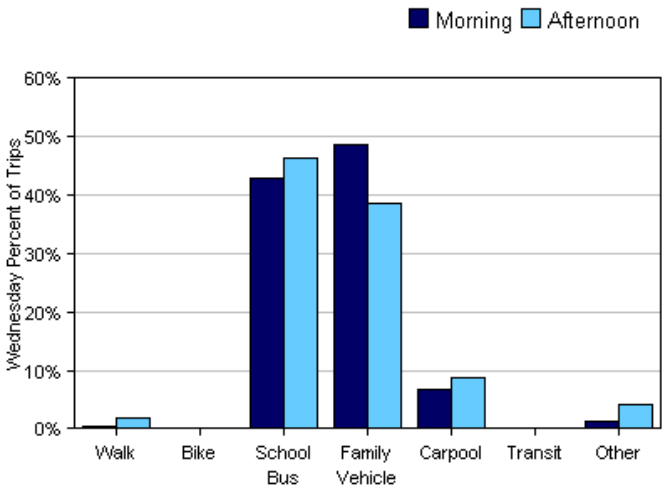
Morning and Afternoon Travel Mode Comparison

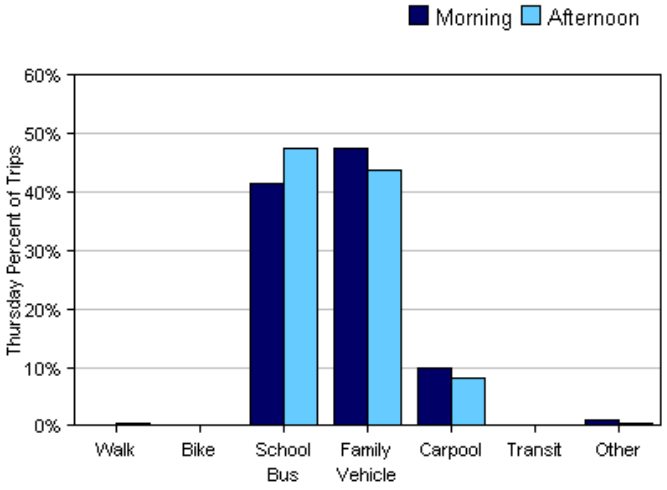
	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	890	0.2%	0%	41%	49%	8%	0%	1%
Afternoon	892	0.8%	0%	47%	41%	9%	0%	2%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day





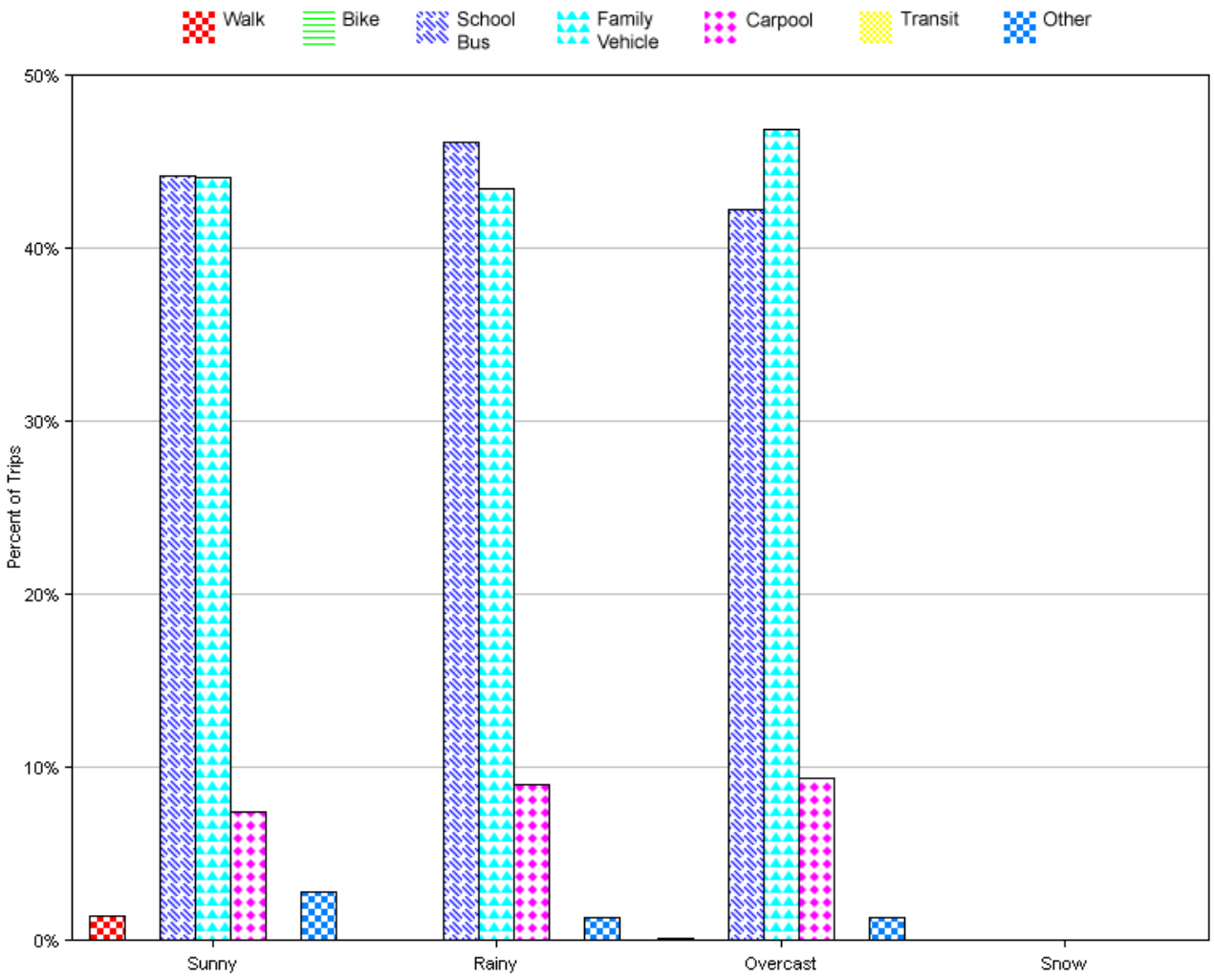


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	314	0.3%	0%	38%	51%	9%	0%	2%
Tuesday PM	315	0.3%	0%	47%	41%	10%	0%	2%
Wednesday AM	285	0.4%	0%	43%	49%	7%	0%	1%
Wednesday PM	284	2%	0%	46%	39%	9%	0%	4%
Thursday AM	291	0%	0%	42%	47%	10%	0%	1%
Thursday PM	293	0.3%	0%	47%	44%	8%	0%	0.3%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	574	1%	0%	44%	44%	7%	0%	3%
Rainy	455	0%	0%	46%	44%	9%	0%	1%
Overcast	753	0.1%	0%	42%	47%	9%	0%	1%
Snow	0	0%	0%	0%	0%	0%	0%	0%

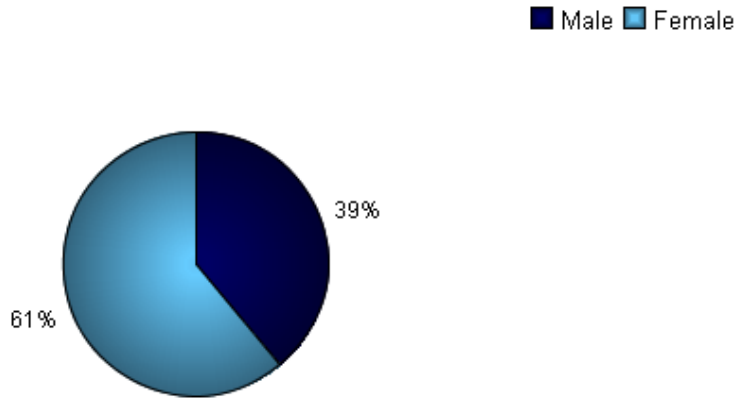
Percentages may not total 100% due to rounding.

Parent Survey Summary

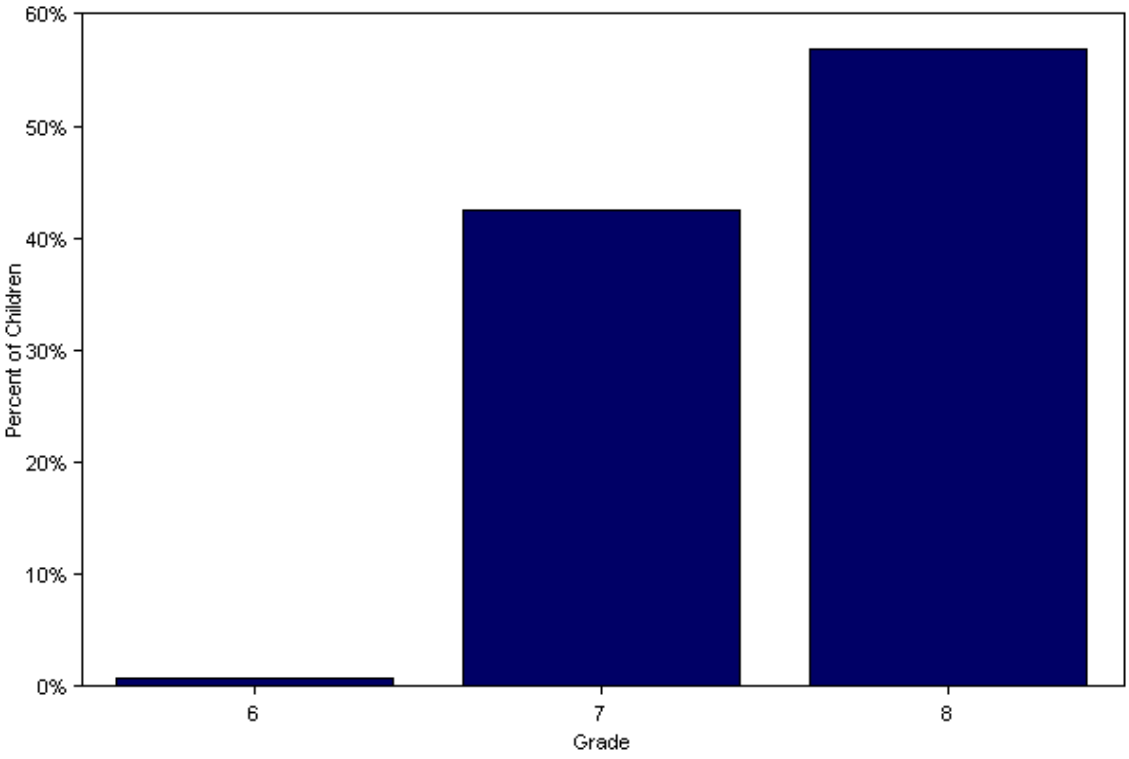
Program Name:	City of Archdale	**Month and Year Collected:**	January 2010
School Name:	Archdale Trinity Middle School	**Set ID:**	3415
School Enrollment:	816	**Date Report Generated:**	06/13/2011
Enrollment within Grades Targeted by SRTS Program:	816	**Number of Questionnaires Analyzed for Report:**	138
Number of Questionnaires Distributed:	800		

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

Sex of children for parents that provided information



Grade levels of children represented in survey

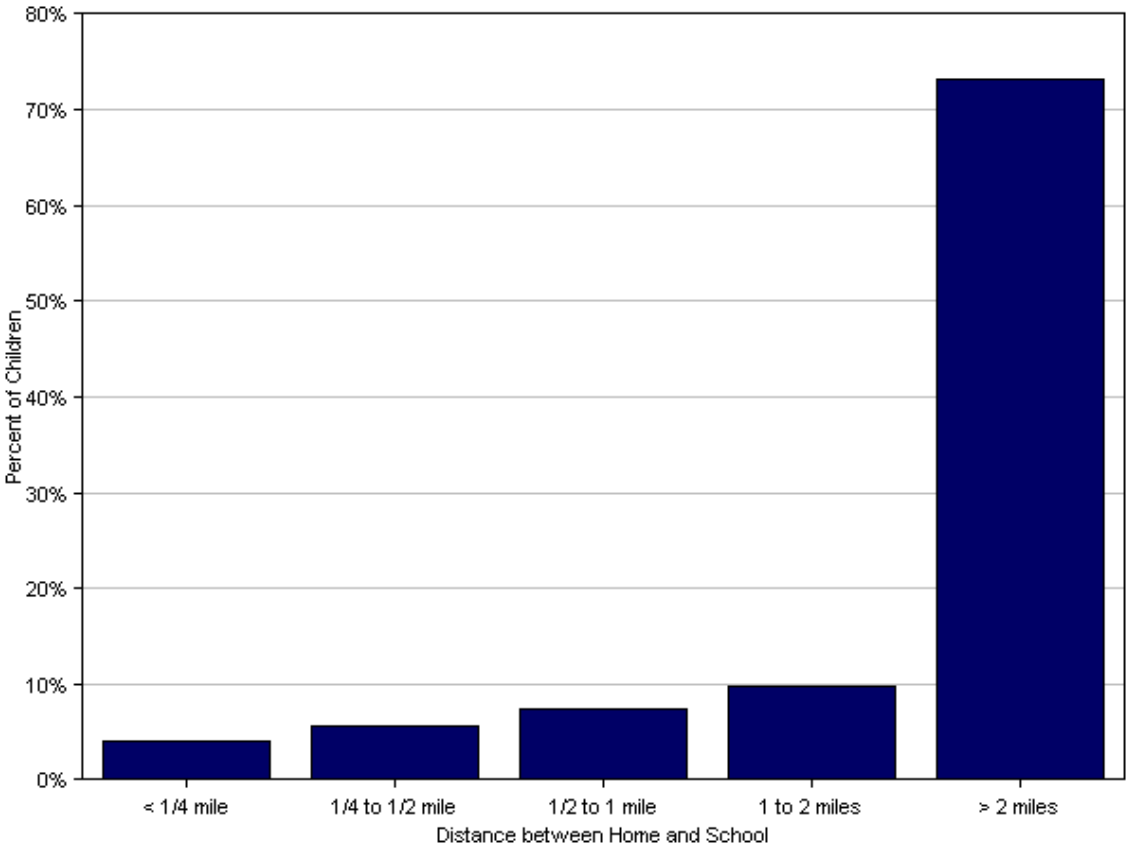


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
6	1	1%
7	56	42%
8	75	57%

No response: 6
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

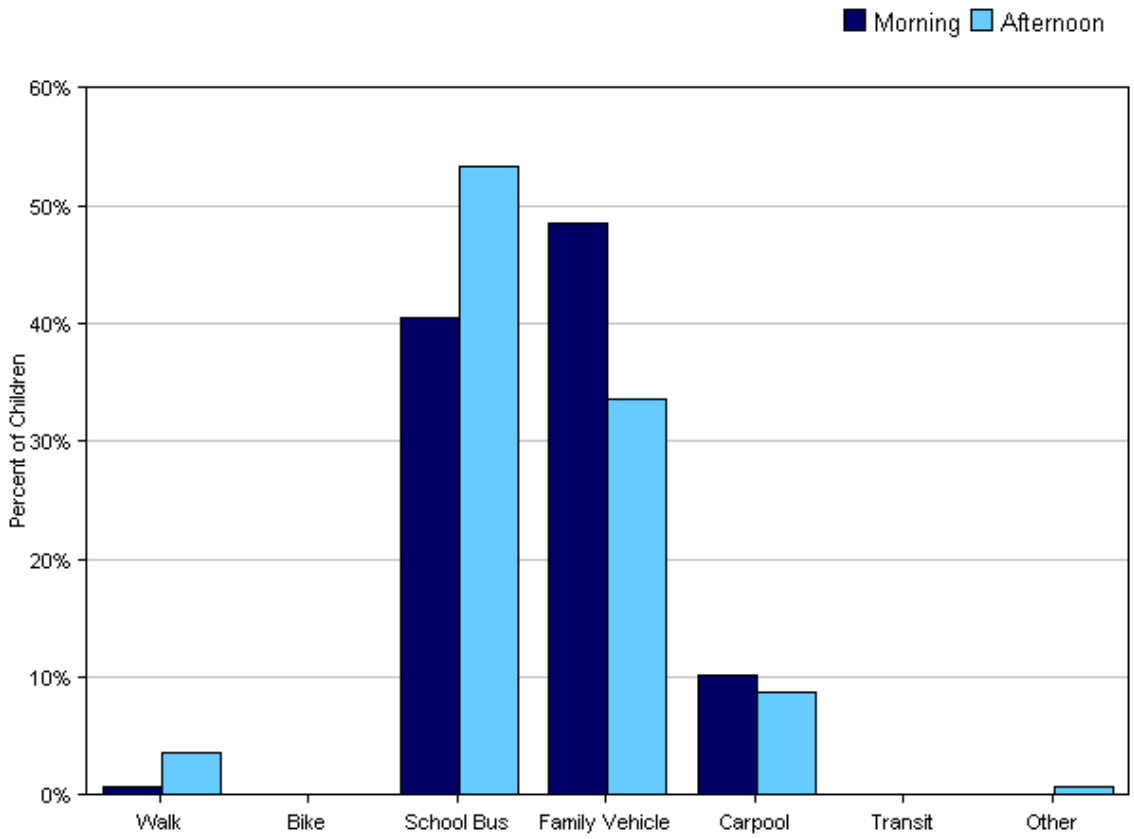


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	5	4%
1/4 mile up to 1/2 mile	7	6%
1/2 mile up to 1 mile	9	7%
1 mile up to 2 miles	12	10%
More than 2 miles	90	73%

Don't know or No response: 15
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

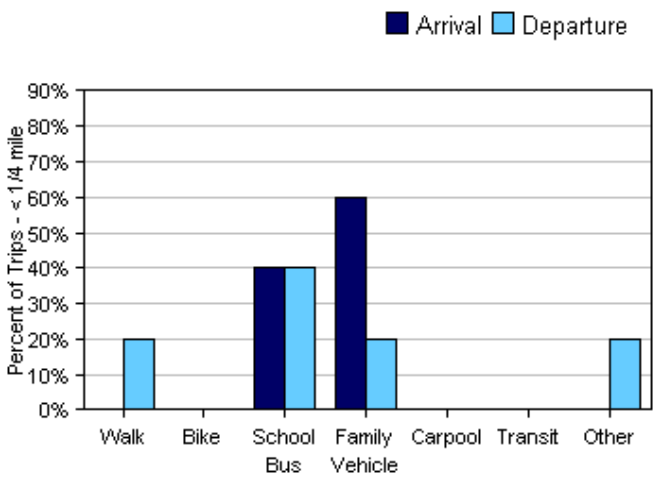


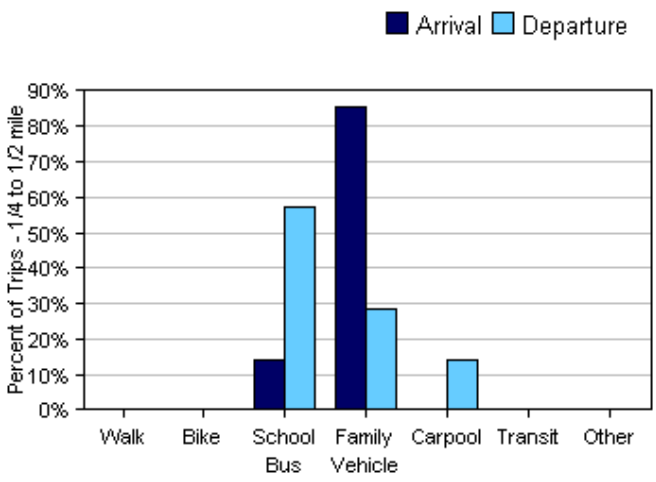
Typical mode of arrival at and departure from school

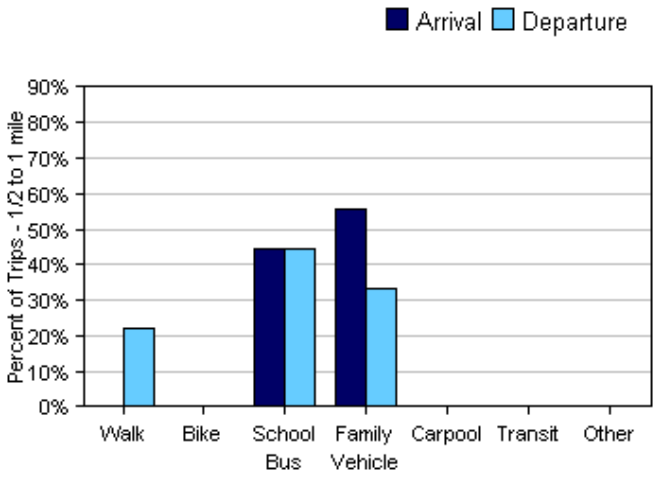
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	138	0.7%	0%	41%	49%	10%	0%	0%
Afternoon	137	4%	0%	53%	34%	9%	0%	0.7%

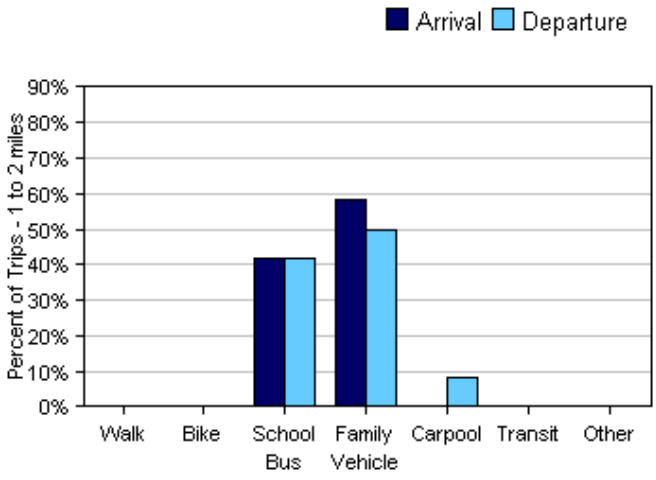
No Response Morning: 0
No Response Afternoon: 1
Percentages may not total 100% due to rounding.

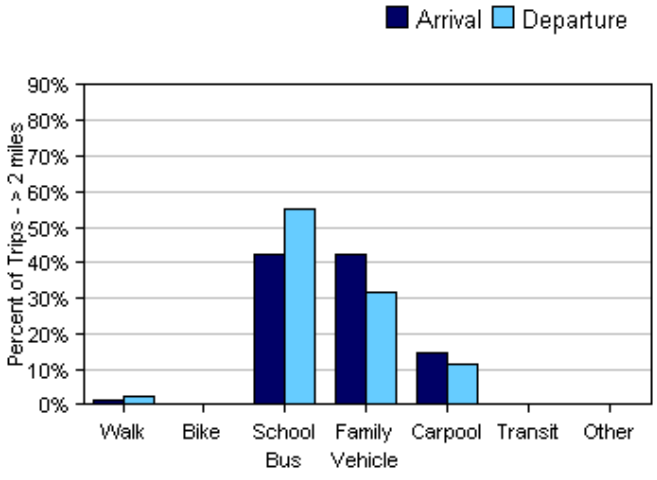
Typical mode of school arrival and departure by distance child lives from school











Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	5	0%	0%	40%	60%	0%	0%	0%
1/4 mile up to 1/2 mile	7	0%	0%	14%	86%	0%	0%	0%
1/2 mile up to 1 mile	9	0%	0%	44%	56%	0%	0%	0%
1 mile up to 2 miles	12	0%	0%	42%	58%	0%	0%	0%
More than 2 miles	90	1%	0%	42%	42%	14%	0%	0%

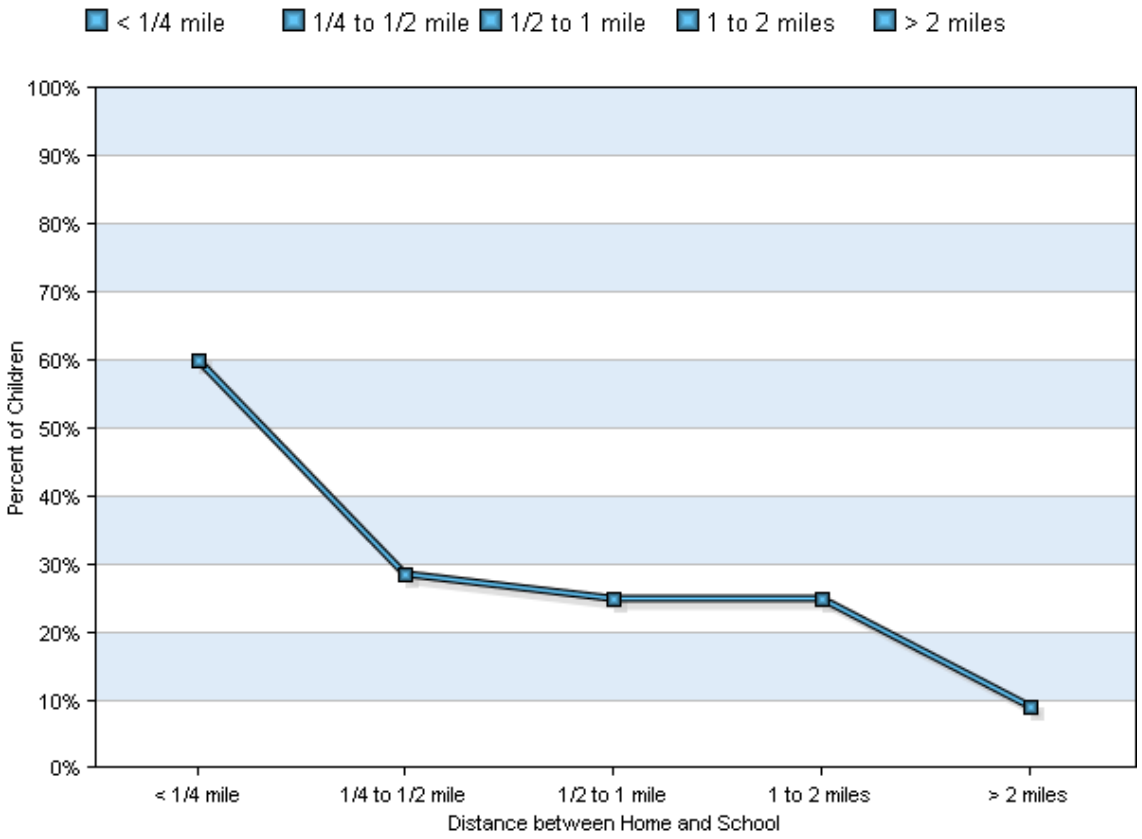
Don't know or No response: 15
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	5	20%	0%	40%	20%	0%	0%	20%
1/4 mile up to 1/2 mile	7	0%	0%	57%	29%	14%	0%	0%
1/2 mile up to 1 mile	9	22%	0%	44%	33%	0%	0%	0%
1 mile up to 2 miles	12	0%	0%	42%	50%	8%	0%	0%
More than 2 miles	89	2%	0%	55%	31%	11%	0%	0%

Don't know or No response: 16
Percentages may not total 100% due to rounding.

Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

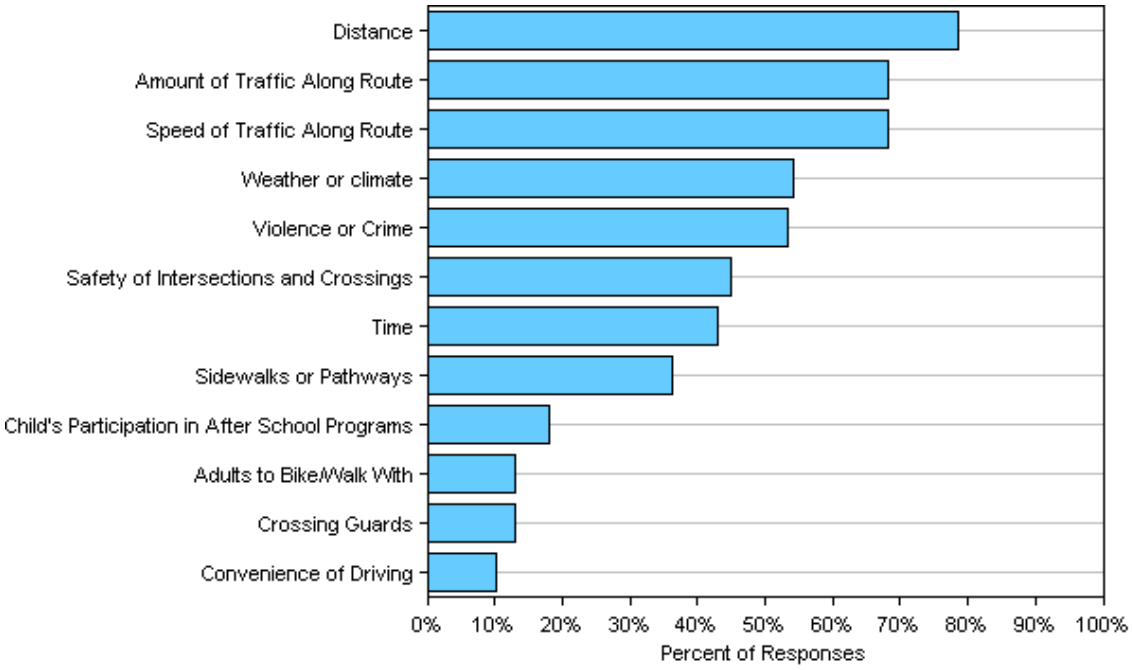


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

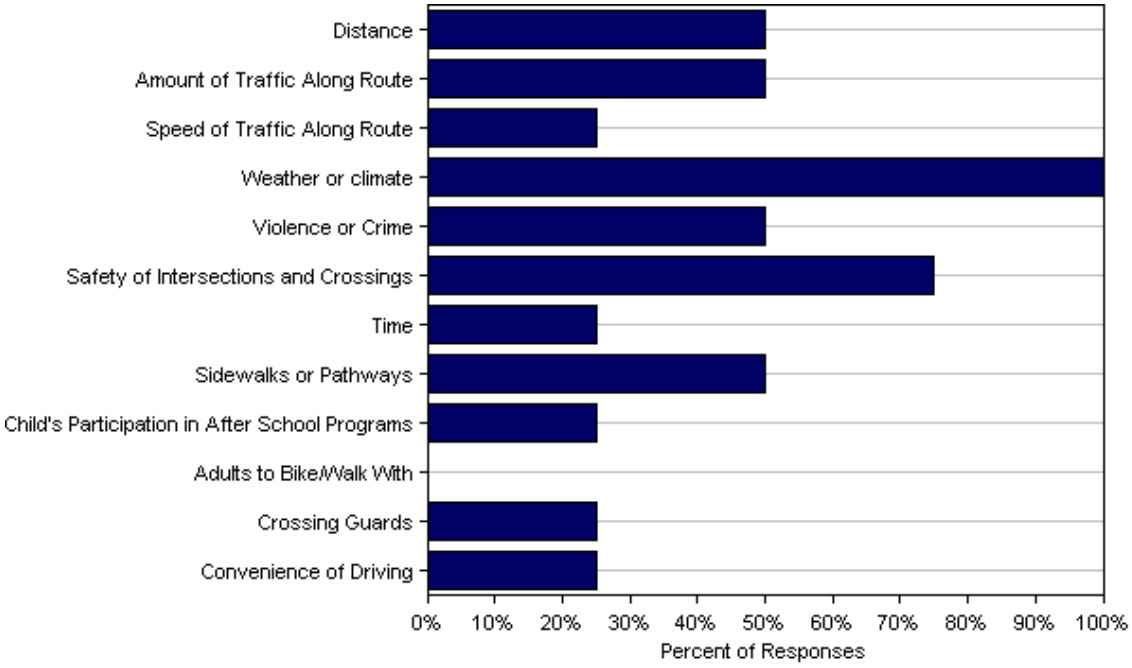
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	18	60%	29%	25%	25%	9%
No	102	40%	71%	75%	75%	91%

Don't know or No response: 18
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school



Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

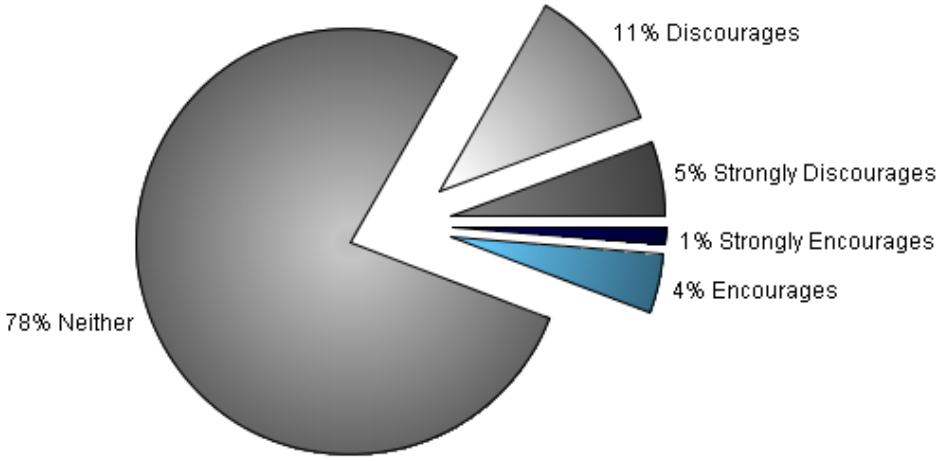


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

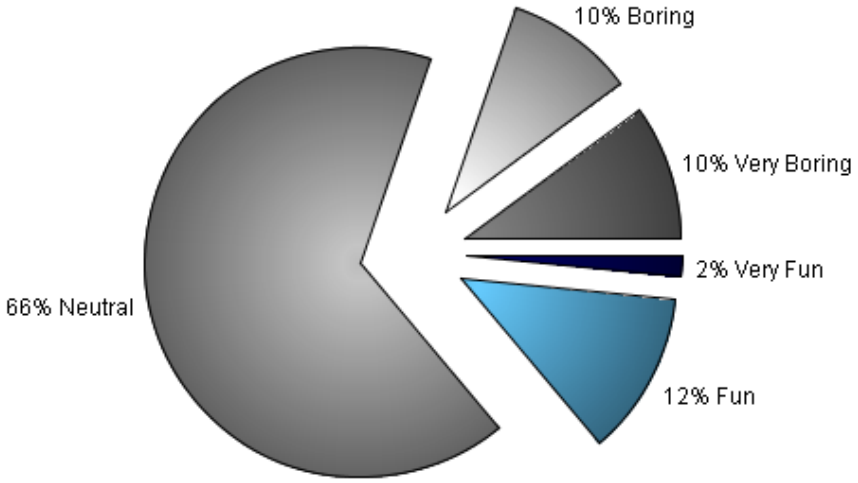
Issue	Child does not walk/bike to school	Child walks/bikes to school
Distance	78%	50%
Amount of Traffic Along Route	68%	50%
Speed of Traffic Along Route	68%	25%
Weather or climate	54%	100%
Violence or Crime	53%	50%
Safety of Intersections and Crossings	45%	75%
Time	43%	25%
Sidewalks or Pathways	36%	50%
Child's Participation in After School Programs	18%	25%
Adults to Bike/Walk With	13%	0%
Crossing Guards	13%	25%
Convenience of Driving	10%	25%
Number of Respondents per Category	**116**	**4**

No response: 18
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

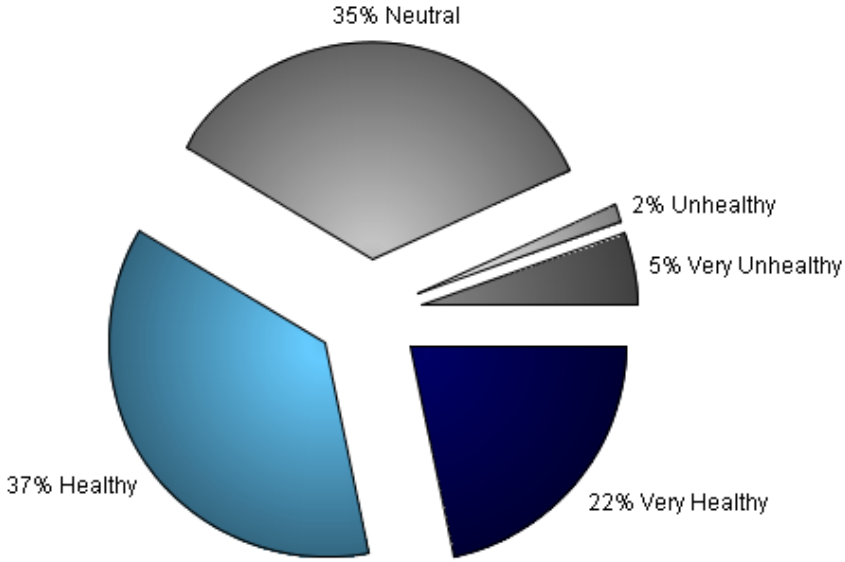
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



Parents' opinions about how much fun walking and biking to/from school is for their child



Parents' opinions about how healthy walking and biking to/from school is for their child



Comments Section

SurveyID	Comment
364704	violence and crime is a huge concern for me, she is irreplaceable.
357379	Sidewalks would help as would crossing guard at high school.
364167	When Will Creekside path to Kenwood finished?
364168	When Will Creekside path to Kenwood finished?
353169	Number 14 is a silly question.
364694	How will this info be used, who is sponsoring this survey?
353064	I would not let my child ride to school on a bike under any circumstances. It is dangerous
357376	Safety is the first concern.
357407	ATMS needs help with morning traffic issues. I live 7 min. from the school and I have to leave my house at 7:20 and to get there at 7:50. We sit in the road for 20 or more minutes.
353109	why would anyone encourage this dangerous practice?
357392	I absolutely would not allow my childe to walk/bike to school.
364705	I live in the country with no sidewalks @ 55 mph Finch Farm Rd.