

Kid Corridors: Taking Steps to School

An Active Commuting Plan for the Williamsville Central School District



University at Buffalo
Department of Urban and Regional Planning
Graduate Planning Studio Workshop
Fall 2009



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Regular physical activity improves academic achievement as well as the physical and emotional health of children. The percent of children walking and bicycling to school has declined from 42% in 1969 to 15% in 2001. One response to this trend has been the federal Safe Routes to School Program (SRTS), established in 2005, which aims to make walking and bicycling to school safer and more appealing for children in kindergarten through eighth grade, including those with disabilities. In 2008, the Town of Amherst, in collaboration with the Williamsville Central School District (WCSD), received an SRTS grant. The Town of Amherst charged the Department of Urban and Regional Planning at the University at Buffalo to develop materials to encourage and educate children to walk and bicycle to school. Twelve graduate students from the University at Buffalo's Urban and Regional Planning Department prepared the Kid Corridors Plan in the fall of 2009 under the supervision of Dr. Samina Raja in partial fulfillment of this charge.

The central goal of the Kid Corridors Plan is to promote walking and bicycling – or active commuting - to school among the 7,017 children studying in grades K-8 in the Williamsville Central School District. The geographic scope of the Kid Corridors plan is the area served by the WCSD, the largest among four school districts in the Town of Amherst. The Town, a relatively affluent first ring suburb north of Buffalo, NY in Erie County is dominated by residential land use with commercial development along its main arterials. As part of the Kid Corridors planning process, UB planners held outreach sessions with children and adults in the planning area, analyzed the built environment in the planning area using Geographic Information Systems, conducted a detailed audit of two case study sites in the district (Country Parkway and Heim Elementary and Middle Schools), analyzed data from a survey of WCSD students and parents, and reviewed applicable legal regulations. The Kid Corridors plan is also informed by a survey of literature and best practices on active commuting trends and policies nationwide.



Image Source: Kid Corridors



Image Source: Kid Corridors

Barriers to Active Commuting

In the WCSD, only 7.8 % of children in grades K-8 currently walk or bicycle to school, even though an estimated 48.8% live within 1-mile of their schools. The Kid Corridors Plan identifies key barriers to active commuting for youth in the WCSD as: 1) traffic conditions that hinder walking and bicycling including busy roads and intersections, high traffic volume and speeds, and dangerous drivers; 2) parents' concerns about abduction or exploitation of their children; and 3) lack of physical infrastructure maintenance. Other barriers are a culture of not walking, the pedestrian-unfriendly design of the built environment, and physical strain from carrying school backpacks.

Opportunities for Active Commuting

A key opportunity is that WCSD parents recognize the importance of daily exercise in their children's lives. The imagination and enthusiasm of youth studying in the Williamsville Central School District are opportunities for creative promotion of active commuting. Children often see opportunities where parents see barriers. For example, children view piles of snow and leaves as an opportunity for play on their routes to school while parents may view them as obstructions. Other significant opportunities are the presence of supportive organizations and Amherst's low crime levels.

Recommendations

The Kid Corridors Plan offers a series of policy, program, and physical recommendations directed to the Town of Amherst and the Williamsville Central School District to facilitate children's active commute to school. The creation of a Kid Corridors Subcommittee of the Town Youth Board charged with implementing this plan and overseeing ongoing development is a pivotal recommendation. The planners also recommend the Town designate Kid Corridors zones extending one mile around all WCSD elementary and middle schools. Policy changes and physical improvements to facilitate walking would be directed to these zones. For example, the Town Engineering department would provide pedestrian-friendly physical infrastructure in these zones, and the Amherst Police Department would enhance enforcement of traffic laws, including crosswalk laws, and sidewalk maintenance regulations within the Kid Corridors zones. The WCSD would educate students in safely navigating on foot or bicycles within the Kid Corridors zones.

An immediately implementable recommendation of the Kid Corridors plan is for the WCSD to send families of their students living within one mile of a WCSD elementary or middle school a detailed map of the shortest and most convenient walking/bicycling route to their school. Active commuting maps for each school in the WCSD, provided in the Kid Corridors plan, should be made available for easy access on the District's website as well.



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Regular physical activity improves the physical and emotional health of children as well as their academic achievement. In the past, many children engaged in regular physical activity when walking or bicycling to school. In the last several decades, the numbers of children walking and bicycling to school has declined dramatically. In the context of this trend, the Safe Routes to School Program*, a federal program established in 2005, aims to make walking and bicycling to school safer and more appealing for children in kindergarten through eighth grade, including those with disabilities. In 2008, the Town of Amherst, in collaboration with the Williamsville Central School District (WCSD), received a Safe Routes to School grant of \$550,000. The Town of Amherst† charged the Department of Urban and Regional Planning at the University at Buffalo to develop encouragement and educational strategies and materials to complement the Safe Routes to School Program administered by the WCSD and the physical improvements coordinated by the Town Engineering Department. This report, in part, fulfills this charge.

Active Commuting

Active commuting refers to the use of any self-propelled means of transport to and from school or work. Active commuting is a source of regular physical activity. The planning studio defines active commuting as walking and, or, bicycling to school. Active commuting can also refer to other active means such as skateboarding, jogging, or in-line skating. Active commuting contributes to an active living lifestyle, where people integrate physical activity into their daily lives.

Forty years ago, over 40% of children walked or bicycled to school, but in 2001, less than 20% of children walked or bicycled to school, according to the U.S. Center for Disease Control and Prevention (CDC). A CDC survey reveals distance to school as the number one parent-identified barrier to active commuting to school by children. The trend over the past fifty years of children attending small, neighborhood schools to larger schools on the periphery of the community contributes to this barrier. Parents also identify traffic-related danger, weather, and crime-related danger as barriers. Overcoming these barriers would allow children to reap the many benefits of active commuting, including increased physical and psychological health, academic achievement, and social opportunities.

* The SRTS program is a federally funded grant program that awards money to communities, via state governments, for improving students' ability to walk to school. Grant applicants are encouraged to address education, encouragement, engineering, enforcement, and evaluation, or the five "E"s. Legislative details on the SRTS program are available in Chapter 5.

† Also referred to as Amherst or the Town in the report.



Kid Corridors: Taking Steps to School, A Studio Workshop

A planning studio of 12 University at Buffalo Urban and Regional Planning graduate students prepared this report in the fall of 2009 under the supervision of Dr. Samina Raja in partial fulfillment of a contract between the Town and the University at Buffalo. Also in fulfillment of this contract, a 2009 spring semester studio under the supervision of Dr. Ernest Sternberg examined the sidewalk network in the Town and Dr. Ferdinand Lewis is developing traffic safety educational curriculum to be used in the WCSD. In this report, the 12 graduate students are referred to as either the planning studio team or planners.

Planning Area

The geographic scope of this planning report (Figure 1.1) is the area served by the (WCSD) within the Town of Amherst. Amherst is a first ring suburban town north of Buffalo, NY in Erie County for which the 2008 American Community Survey reports a population of 119,015. Town residents are relatively affluent with high educational attainment[†]. Situated in the Town is the Village of Williamsville, Residential land use dominates the Town. Exceptions include the presence of commercial and office buildings along main arterials as well as the extensive University at Buffalo North Campus, which includes academic, athletic, and residential buildings.

WCSD is the largest among four school districts in the Town of Amherst. WCSD boundaries extend into the Town, the Village of Williamsville, and a small portion of the neighboring Town of Clarence.

Wherever possible, the Planning Studio collected and analyzed data at the geographic scale of the planning area (i.e. the WCSD). Due to data constraints, the community background presented in this report, which draws on recent census data, describes conditions of the Town and is not specific to the WCSD.

Goals and Objectives

The goal of this plan is to increase the numbers of children walking or bicycling to school in the WCSD. This involves ensuring that safe routes to school are available, both physically and perceptually, and fostering a culture of active living. This report identifies four objectives for encouraging walking and bicycling to school. These include:

- 1) Raising awareness of the benefits of active commuting
- 2) Promoting safety measures
- 3) Educating stakeholders
- 4) Engaging youth in the planning of their safe routes to school

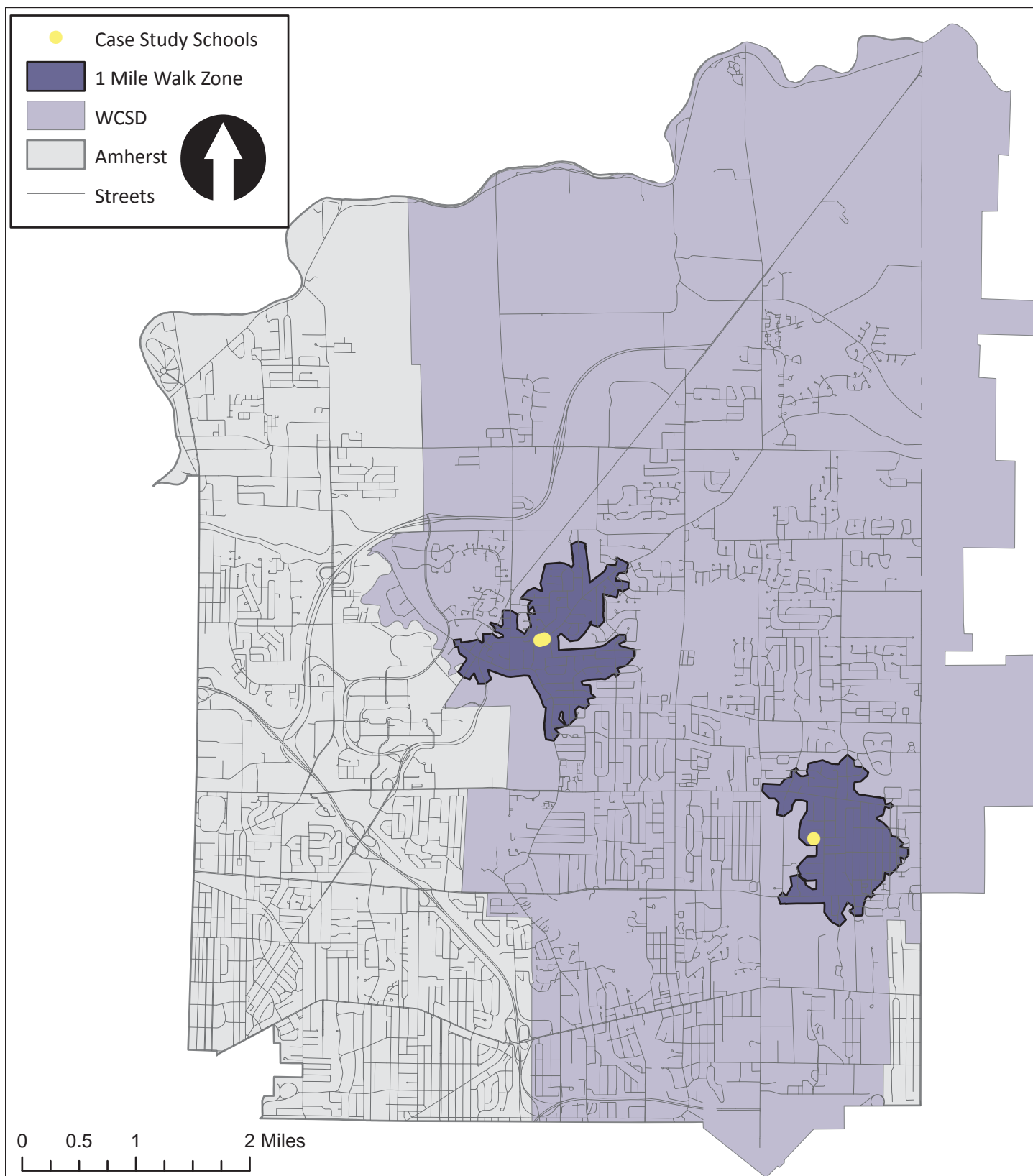
Although this report focuses on the WCSD as a planning area, neighboring school districts and towns could utilize portions of this report to guide efforts to promote walking and bicycling to and from school in their communities.

Four Principle Objectives

1. Raising awareness of the benefits of active commuting
2. Promoting safety measures
3. Educating stakeholders
4. Engaging youth in the planning of their safe routes to school

[†] Situated in the Town is the Village of Williamsville, also referred to as the Village.

Figure 1.1: Planning Area



Data Source: Town of Amherst Engineering Department

1 - Introduction



Report Layout

This report is comprised of 10 chapters. After the executive summary, chapters one, two, and three introduce the problem, the stakeholders, and a survey of literature documenting factors affecting walking and bicycling to school, respectively. Chapters four through seven describe current conditions that are likely to impact active commuting in the planning area. Chapter four outlines the demographics, built environment, and safety conditions of the planning area. Chapter five reviews laws and policies concerning pedestrians and bicyclists. Chapter six describes current active commuting behaviors among children in the WCSD. Chapter six also examines the cost of driving to school. Chapter seven details case studies of two school sites in the WCSD: 1) Country Parkway Elementary School and 2) Heim Middle and Elementary Schools. Chapter eight synthesizes information from chapters five through seven and offers key findings, organized by key barriers and key opportunities. Chapter nine discusses best practices for effective ways to promote walking and bicycling to and from school. Finally, chapter ten proposes policy, program, and physical recommendations to encourage walking and bicycling to and from school.

A reader can consult directly individual chapters of interest as well as read the ten chapters in order. A parent who wants to know more about what other parents and children in the WCSD have said about active commuting or which stakeholders may be poised to partner in advocating active commuting could look at chapter two, Stakeholders. A child who wants to know how many other WCSD students are walking or being driven to school in the WCSD could find out in chapter six, Current Conditions. A community non-profit or local government agency who wants to know more about existing examples of walking school bus programs or how other municipalities have improved intersections for pedestrians could turn to chapter nine, Best Practices, to learn more. A school district administrator or teacher who wants to know more about New York State Education Law requirements for traffic safety instruction could refer to chapter five, Legal Framework, for more information. A reader could also read chapters eight and ten for a summary of key findings and recommendations.

1 - Introduction

2 - Stakeholders

3 - Literature Review

4 - Context

5 - Legal Framework

6 - Current Conditions

7 - Case Study

8 - Key Findings

9 - Best Practices

10 - Recommendations



Citizen Participation

Citizen participation is an important part of any planning process to promote active commuting among children. It is a mechanism for people, young and old, to express their concerns, identify a problem in their community, as well as a way for them to recommend solutions. It is important to ensure citizen participation from the onset of a planning process. Citizens are more likely to support the implementation of a plan that results from a process in which they have been engaged from the start.

A well-conducted citizen participation process has multiple benefits. When planning is informed by people's full participation, a plan will more likely meet their needs. Citizen participation processes also serve an educational purpose. By participating in the planning process, citizens learn about issues in their neighborhoods and communities. Residents who vocalize their opinions and engage in the plan-making process have a better chance of effecting desirable change.

The following section documents the multiple voices of key stakeholders – Amherst residents, young and old, living in the Williamsville Central School District area on the issue of active commuting by youth. It also describes the many stakeholder organizations that are, and can, support active commuting (see Figure 2.1). Details about the citizen participation process undertaken by the Planning Studio is available in Appendix A. Guidelines to hold your own visioning meeting can be found in Appendix B.

Figure 2.1: Parents Visioning Meeting Breakout Groups



Image Source: Lisa Muscato

2 - Stakeholders



Youth Involvement in the Planning Process

An integral part of citizen participation for an active commuting plan for youth is *their* involvement in the planning process; they are the residents who are, and will be, actively commuting to schools in the WCSD – and the key stakeholders of this plan.

The work of this planning studio was guided by the vision of Amherst youth. This vision outlines a perfect neighborhood for active commuting. Children's voices were documented using two key methods. First, the studio conducted a youth visioning session. During the visioning session children illustrated their ideal walking environment through art. Second, the studio held an interactive assembly that included two components: 1) a cognitive mapping exercise with youth and 2) open ended interviews with youth asking them to assess features of a built environment (shown to them on photographs) for walkers and bicyclists. Through the cognitive mapping exercise, youth prepared cognitive maps of their current routes to school.

Studio members analyzed materials generated by youth in the visioning session and the cognitive mapping exercise, art and maps respectively. Studio members also recorded and analyzed children's oral assessment of a virtual built environment. Through this qualitative analysis, studio members noted reoccurring themes raised by children. These themes highlighted by youth in each exercise are reported here.

"Participation is the fundamental right of citizenship....the means by which a democracy is built and....a standard against which democracies should be measured." [1]

Figure 2.2: Certificate Awards at Visioning Session



Image Source: Lisa Muscato

Youth Residents' Vision of a Walkable Neighborhood - Results From a Visioning Exercise

Children have a different worldview and different needs than adult residents of a community. In a youth visioning session hosted by the planning studio, children between the ages of 3 and 11 were asked to create artwork illustrating their ideal neighborhood and their preferred means of traveling to school. Children's artwork – specifically, drawings - reiterate four themes: physical neighborhood characteristics, modes of transportation, exposure to nature, and aesthetic appeal.

Physical Neighborhood Characteristics

Children view recreational destinations as an important attribute in a walkable neighborhood. Their artwork integrates traditional features, such as parks and swimming pools, as well as non-traditional features, such as roller coasters, in a depiction of a walkable neighborhood. Inclusion of recreational destinations in neighborhoods is likely to entice youth to walk in their neighborhoods.

Figure 2.3: Child's Route to School

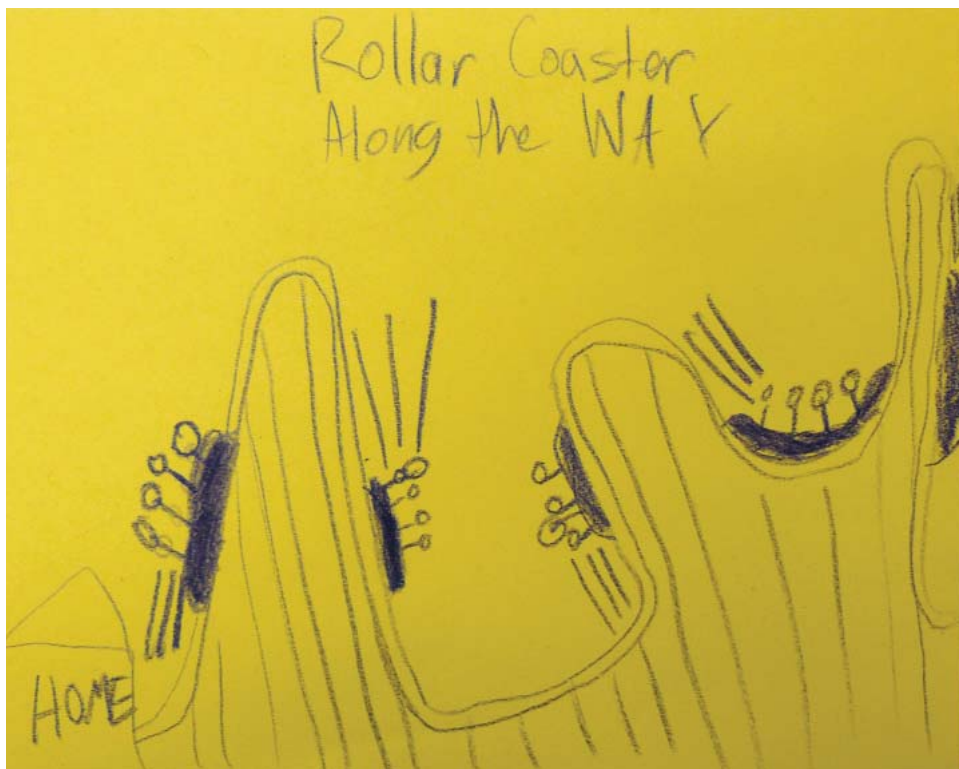


Image Source: WCSD Student Liam Flanagan

2 - Stakeholders



Modes of Transportation

Cars are not the only way that children prefer to travel. Students walking on foot and riding bicycles frequently appeared in children's artwork as well as did other unusual modes of travel, such as children traveling on rockets, jet packs and space ships. One girl depicted her travel preference as travelling to school on a purple horse. Children are willing to use different methods of traveling to school.

Interest in Nature

Young people are excited by nature. Their depictions of walkable neighborhoods are filled with images of flowers and gardens. Animals, such as dogs, cats, and birds, feature prominently in children's depictions. The possibility of witnessing nature and wildlife will likely encourage children to walk in their neighborhoods.

Figure 2.4: Children's Routes to School

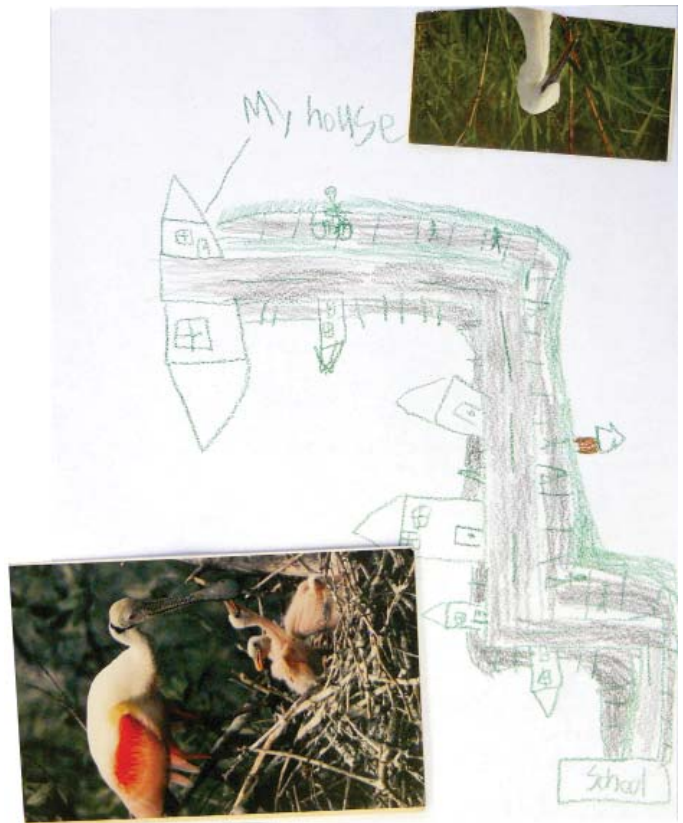
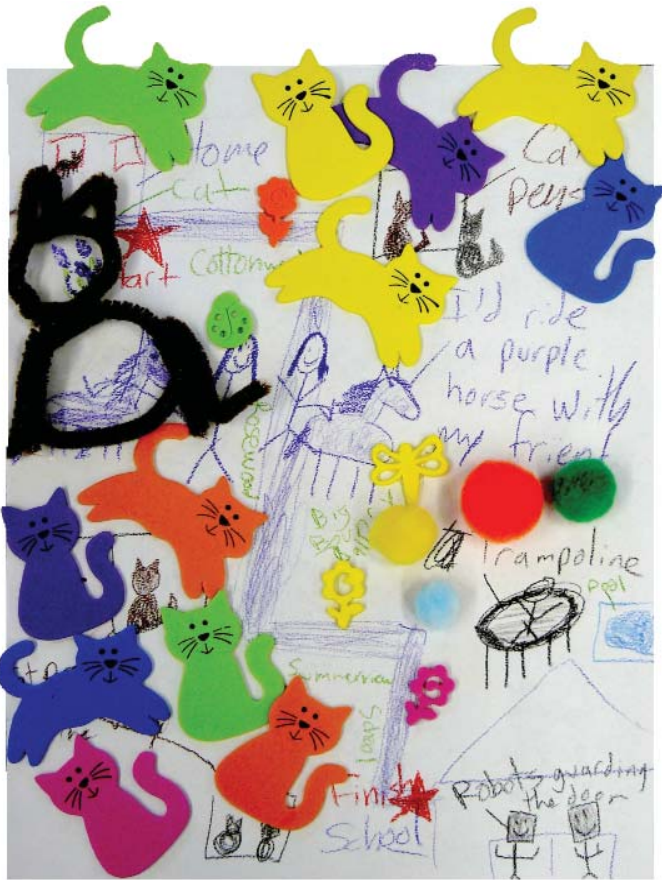


Image Source: WCSD Students Noelle Gulick and Liam Flanagan

Aesthetic Appeal

Walkable neighborhoods must appeal to the aesthetic preferences of children. Vibrant colors are an important feature for children. Children depicted their vision of a neighborhood using materials of different hues. Children are likely to find landscapes designed with splashes of color more visually stimulating and such a landscape is likely to offer a more fun home-to-school journey.

Youth Residents' Recollection of Their Neighborhoods - Results From a Cognitive Mapping Exercise

During an interactive assembly facilitated by the studio members, students from Country Parkway Elementary participated in a cognitive mapping exercise to document their home-to-school routes by creating maps based on their memory. Children drew features that leave the greatest impression on their mind. Some features are noticeable by their absence in the maps.

Nine students participated in the exercise, none of whom regularly walk to school. Three students take the bus, two are driven by car, and four travel by combination of car and bus. Reoccurring themes appear in children's maps of their home-to-school routes. Specifically, children's maps highlight common retail destinations, green space, and social interaction activities along the routes.

Figure 2.5: Cognitive Mapping Exercises



Image Source: Kid Corridors

Homes of friends and acquaintances are featured in children's school route maps. Children are aware of where their friends live. For example, one girl, who was driven to school identified her friends' house on her route map. The chance of seeing friends at their houses may offer a motivation for children to walk.

[illegible]

Peer Interaction

Social interaction with peers is an important component of children's travel to school. This is especially evident among children who travel to school by bus, whose maps prominently feature depictions of social interaction with fellow schoolmates. Modes of travel that increase the opportunity for peer interaction are likely to be favored by children. A walking/bicycling program that capitalizes on the power of peer relationships is more likely to be successful.

Four of the nine children – all of whom are driven to school- identify specific retail destinations on their maps, including pharmacy stores (Walgreens), grocery and convenience stores (Tops and Wilson Farms), and movie-rental stores (Blockbuster).

Trees and grassy areas feature prominently in route maps drawn by children. Increasing the amount of trees and green spaces along school walking routes may offer a more inviting atmosphere for youth.

Youth Residents' Preferences - Results From a Virtual Walking Exercise

Children at the Country Parkway school participated in a virtual walking exercise wherein they assessed the elements of the built environment that are desirable, or undesirable, for walking and bicycling to school. Studio members showed participants photographs of a built environment and asked open-ended questions. Children were asked “What in this picture is good for walking?” Participants were also asked what solutions might improve walkability of the route (See Appendix C). Children’s responses were incorporated into the recommendations of this plan.

Figure 2.7: Virtual Walking Exercise



Image Source: Kid Corridors

What Makes a Route Good for Walking to School?

Children are very perceptive about what makes the built environment conducive to walking. Participants in the virtual walking exercise identified basic physical infrastructure such as sidewalks, street lights, and stop signs. Children also pointed out auxiliary features that at first glance do not appear to have a direct connection with walking. Children identified people, houses, garbage cans, items used to decorate homes, mailboxes, leaves, and grass as features that enhance walkability.

2 - Stakeholders



One girl noted that **long sidewalks** are good for exercise and that “**crunchy leaves**” are good for playing in along the way to school. The presence of leaves on the ground in a photograph received considerable attention from children and much of the conversation centered on this feature. The participants expressed a desire to play in them. The opportunity to play with leaves and snow has the potential to make walking fun and attractive for children.

Another child noted that **wide streets** are good because it lessens the chance of getting hit by a car. Children also reacted positively to Halloween decorations in some photographs. The children also noted that having houses and other people along the walking route was important. Children noted that the presence of adults in the neighborhood made them feel safe and that they could turn to an adult in case of a problem.

What Would You Do to Improve Walking Conditions?

Youth participants offered many creative recommendations for making environments more walkable.

Figure 2.8: Barrier or Opportunity?



Image Source: Kid Corridors

Make Physical Improvements

Children suggested physical improvements such as fixing ‘bumps’ in the sidewalk and adding crosswalks. Some suggested the creation of “moving floors” like those in airports where travelers walk on moving walkways to cover longer distances or to take a respite while the walkway moves them.

Children also recognized the importance of having connected walking pathways. When shown a picture of a short stretch of a sidewalk in front of a house that abruptly ends, children noted that to make the neighborhood walkable the sidewalk needed to be connected to a larger network.

Children also offered creative solutions. When asked how they would respond if faced with a disconnected sidewalk, one child said he would ask a studio member for a piggyback ride. Others suggested underground tunnels and moving floors to overcome the disconnected sidewalks.

Make Walking Routes Safe

Children are concerned with safety. One girl said that streetlights are needed for walking at night. Many participants suggested the importance of separating cars from pedestrians. Children also proposed getting rid of cars all together as cars are seen as an obstacle for walking in a neighborhood.

Create Exciting Child-Friendly Destinations

Children may be more motivated to walk in a neighborhood if the setting is interesting to them, and if opportunities for interactive play are available along walking routes. Children proposed locating water parks, hot dog vendors, and balloon stands along walking routes – suggesting that there is a need for having child-friendly fun destinations along walking routes in neighborhoods. Participants report wanting more places to visit along their walks. One girl mentioned that long sidewalks are good for exercise. Children recommended having trampolines at certain street corners. Children’s comments indicate their strong preference for diverse, vibrant, play-centered destinations along walking routes.



Adult Residents' Involvement in the Planning Process

Adults provide for, and take care of, the youth in their communities. They also shape children's behavior, and are influential in making changes to a child's physical environment. As a result, this plan is informed by adult residents' views and suggestions. The participants of the session were in support of children's active commuting but also have some concerns. The following are adult residents' (mostly parents) vision, concerns, and solutions drawn from two key sources: a visioning session facilitated by studio members, and analysis of responses to an open-ended questions on a survey.*

Figure 2.9: Adults Visioning Meeting



Image Source: Kid Corridors

Adult Residents' Vision of a Walkable Neighborhood - Results from a Visioning Exercise

Vision

Amherst residents, mostly parents, have an expansive vision for a safe, walkable neighborhood, encapsulated in their following collective statement:

"A safe route to school would go through a safe community with sidewalks, bike paths, lights, crossing guards and other methods to ensure safe crossings, and connectivity with a sense of social responsibility for the kids walking to school."

* See detailed methodology in Appendix D.

Importance of Physical Activity and Health

Adult participants affirmed the importance of physical activity. Parents report that physical activity is encouraged within their households. Playing, walking the dog, running errands, and bicycling are some activities parents report as common in their households. One parent mentioned that during the winter she and her children run around the house just to get some exercise.

Parents in the visioning exercise identified several impediments to their children's physical activity. These include access to electronics (such as video games and computers) and time constraints as a result of busy lifestyles comprised of after school activities and homework. Parents report that their children obtained much of their physical activity in their backyards or inside their homes, but that their children often express a desire to venture away from these locations. Improving the walkability of a neighborhood would help to do so.

Key Parental Concerns About Children Walking and Bicycling to School

Importance of Safety and Security Measures

Residents who live within the planning area have much to say about children's safety and security. Residents express concern about the volume and high speeds of vehicular traffic. The aggressive behaviors of drivers are also a concern for parents in the WCSD planning area. Residents note that the physical characteristics of streets are also an obstacle for pedestrians and bicyclists. Wide streets and busy intersections are difficult to cross. These factors are deterrents to children's active commuting.

Adult residents report concerns about the lack of sidewalk maintenance. They note that cracks in the sidewalks make bicycling difficult and unsafe. They would be more willing to let their children bike on smooth and up kept sidewalks. Winter weather in the planning area further complicates this issue. Some property owners, though legally responsible for shoveling snow off sidewalks abutting their properties, fail to do so. Snow and ice left on the sidewalks make for difficult walking conditions; however, participants acknowledged that it was unfair to expect elderly residents to shovel their sidewalks in the winter.

Another concern of parents is that streets and sidewalks do not have sufficient lighting. A few adult residents acknowledged that their streets did have lights, but wished to see more. This issue is important to the seasonality of this region. The number of daylight hours decreases in the fall and winter months. This occurs during the WCSD school year so children might walk at times when natural light is limited. Streets with adequate lighting would make routes safer for commuting during months with limited sunlight.

2 - Stakeholders



Residents report crossing guards as a critical component of ensuring a safe walk to school. Currently, crossing guards are not available to all children who may need them for a safe commute. For example, children involved in afterschool activities do not have crossing guards to help cross main intersections. The service provided by crossing guards is important in ensuring a safe commute through a neighborhood and along main roadways.

Security cameras are a new way of incorporating technology to assure the safety of active commuters. They have already been installed on some streets of the planning area. Residents have stated they are in favor of the added safety they provide for their neighborhood. Cameras relieve caregivers' fears about unsupervised children along school routes. An increase in the use of similar technologies would ease parents' apprehensions about children independently commuting.

Lack of Connectivity

Incomplete networks of pathways for walking and bicycling are a matter of concern for the residents of the WCSD planning area. Some residents commented that while their neighborhoods have sidewalks, they are not connected to a larger network. Parents do not view street shoulders as acceptable for use as bike lanes. Other walking trails or bike lanes are present in fragments, not as contiguous networks. This fragmentation makes it difficult for children to walk or bicycle to school. Connecting disjointed networks would provide for seamless active commuting routes.

Limited Sense of Community

Parents in the visioning session expressed concern about the lack of community in their neighborhoods. They report few people spend time outside, and they do not feel that there are "eyes on the street." This means children are unsupervised by parents and neighbors. Parents also report that a poor communication is a problem among residents in the community. Creating a network of designated neighbors and caregivers will increase awareness about children actively commuting.

Involvement from Youth

Lastly, adult residents stressed the importance of having youth involved with the initiative to promote walking and biking to school. They suggested that including children in the planning process would help them attain a more walkable community. Children should be involved in the overall planning process for designing safe routes to school. They are the individuals who walk to and from school and are directly affected by this process.

Concerns of and Solutions Proposed by Parents - Results of a Survey of WCSD Parents

Responses to an open-ended 'Other Comments' question on a survey conducted by the Town of Amherst in 2009 suggests that WCSD parents are concerned about the inadequacy of the town's walkability infrastructure, concern for children's safety, and the lack of crossing guards.[†] Figure 2.10 depicts words that were cited most frequently by parents in regard to active commuting. Words that are larger were cited more frequently than the smaller words.

Figure 2.10: WCSD Parent Survey Commonly Used Terms[‡]



Image Source: Kid Corridors

[†] See methodology Appendix D for details

[‡] A tag cloud is an image depicting the frequency of terms used in a text; the larger the word, the higher the frequency of its use.

2 - Stakeholders



Lack of Infrastructure

One third of all parental comments dealt with the poor quality of walkability infrastructure. Parents noted the absence of sidewalks in many areas, the poor condition of existing sidewalks, and the narrowness of shoulders on roads as a major barrier to safe active commuting. As one parent noted, *“Amherst is very pedestrian/bicycle unfriendly; it’s an embarrassment that they don’t [have sidewalks]!”* [2] Because of these conditions, children who walk to school are at times walking close to vehicular traffic on roads.

Parents also noted the lack of bicycling infrastructure, including limited availability of bicycle racks as well as inconvenient locations of racks and storage facilities. One parent suggested that *“schools should have more bicycle racks that should be placed in convenient and safe locations”* [2].

Parents expressed their willingness – and indeed desire - to allow their children to walk if better infrastructure were available. One parent wrote, *“If we had more sidewalks and shoulders I would be more comfortable with my children walking or biking; that is how I grew up and it was so healthy!!”* [2].

Another parent who *“would love for [her children] to have the option to walk”* proposed the construction of a *“[pedestrian] bridge over Millersport Highway”* to facilitate her children’s active commute to school [2]. Parents’ responses suggest infrastructure improvements will encourage parents in allowing their children to walk or bike to school.

“Amherst is very pedestrian/bicycle unfriendly; it’s an embarrassment that they don’t [have sidewalks]!”

“If we had more sidewalks and shoulders I would be more comfortable with my children walking or biking; that is how I grew up and it was so healthy!!”

Concerns About Safety from Crime

A key concern of parents is their children’s exposure to danger through active commuting. One parent’s comment captures this sentiment: *“My kids will always bus; this world is too dangerous!!!”* [2]. Some parental concerns for safety stem from a perception of crime in the nation’s society. One parent notes *“With cases of missing and exploited children and women being abducted, I am not comfortable with [my children] walking or biking,”* [2]. In a similar vein another parent acknowledged that, *“[I am] extremely afraid of sex offenders and abductions of children* [2].

Parents are especially concerned about safety for younger children. One parent wrote, *“Elementary students should not walk unless [the] entire route [is] supervised”* [2]. WCSO parents’ perceptions about safety mirror those of parents nationwide. According to a 2004 study conducted by the U.S. Centers for Disease Control and Prevention, two of the largest barriers toward commuting are parents’ perception of safety and crime [2].

Dangerous Traffic Conditions and Drivers

Another safety related concern cited by parent is traffic-related. Dangerous drivers, high traffic volumes and high vehicular speed limits along routes to schools were frequently noted as a concern by parents, especially where children would have to cross the road. One parent noted *“... As a result of this initiative, there will be more kids walking/ biking and drivers need to be extra aware of them”* [2]. Parents perceive that a number of drivers pay little attention to local traffic laws and by doing so endanger pedestrians and bicyclists on the road. One parent noted *“People run red lights...”* [2].

“... As a result of this initiative, there will be more kids walking/ biking and drivers need to be extra aware of them”

Parents proposed the use of technology for improving traffic enforcement. Drawing upon a precedent from another city, one parent noted *“Maybe a camera to catch the offenders will help; it will be safer for the kids that cross [busy roads]...! It has worked in other cities, for example, San Francisco!!”* [2]. Parents also suggested disallowing right turns on red and lengthening the time allotted for pedestrians to cross busy streets.

Need for Crossing Guards and Crosswalks

The presence of crosswalks and crossing guards are helpful in ensuring children’s safe active commute to school. Although crosswalks and crossing guards do exist in the WCSD planning area, parents think the amount provided for children is inadequate. One respondent claimed that the presence of a “crossing guards would alter [her/his] decision,” [2] to allow her/his child to walk to school. Another parent noted that to facilitated active commuting *“... Crosswalk[s] [are] needed...”* [2]. In Amherst it may be possible for residents to hold volunteer positions for crossing guards to provide this service.

Concerns with Walking and Bicycling Distances

Amherst is a suburban town and development in the WCSD planning area is spread across a great distance with few neighborhood schools. As a result, many families’ homes are a considerable distance from school (see Chapter 6). Many parents who responded to the survey noted that they lived too far from school to allow their child to actively commute. Comments such as *“We are basically too far for him to ride [his] bike”* [2] were commonplace. Some respondents noted that they lived within walking and biking distance to a WCSD school but their children did not attend that school because the school boundaries are decided. One parent noted *“If we were districted to [a closer school] I would let her ride! We are too far [from] and [there are] too many busy streets [en route to her school]!”* [2].

Parents proposed redistricting the school boundaries to facilitate active commuting. One parent requested, *“Please redistrict [the] elementary schools with walking considerations”* [2].



Age and Maturity as Barriers

Parents understandably factor their child's age(s) in their decision to allow them to walk and ride a bicycle to school. One parent noted, *"Because of his young age I prefer him to take the school bus. I also think it helps him to feel independent and promotes him to have good behavior while in another adult's company."* [2] In a similar vein, another parent wrote, *"My child's maturity level affects my decision more than anything"* [2]. A number of parents specified an age threshold for active commuting. One parent noted *"I do not feel children under the age of 13 should walk or bike to school..."* [2]. They would not allow walking or biking to elementary school because of the young ages, but it is more reasonable for middle school kids.

Physical Strain from Large Book Bags

Some parents view the weight of their children's school bags as a barrier to walking. One parent notes the health impact of carrying book bags: *"book bags [are] too heavy – [they could cause] back strain"* [2]. Another parent notes *"Williamsville has so much homework backpacks are very heavy, so walking or riding [a bicycle] would not work,"* [2]. Parents in the WCSD are concerned that walking long distances with a heavy book bag could cause physical strain.

Infrequent Snow Removal

As noted in Chapter 5 the Amherst Town Code, Section 83-9-5, states that it is the responsibility of property owners to clear snow from sidewalks located along their property.[§] A number of parent respondents to the survey are concerned that many property owners do not remove snow from sidewalks adjacent to their property. As a result, students who walk to school in the winter have to either trudge through the snow or seek an alternative route, possibly the road. One parent respondent remarked, *"I see many children walking to [school] in the middle of the street during the winter... It is an accident waiting to happen!!!"* [2] In a similar vein other parents acknowledged that *"If [residents] would plow... in the winter it would be much safer for the many students who walk"* [2].

[§] In Section 83-14-1, the Town says that its only responsibility concerning sidewalk snow removal is to respond to complaints.

Public Education

Even the best active commuting plan cannot be implemented without citizen support and public education. A very supportive parent respondent proposed that the initiative to create safe routes to school be highly publicized in local newspapers, with the intention of educating the public and motivating drivers to be more alert and safe. The parent wrote:

Supportive Comments from Parents

“Thank you for this survey and we hope to get sidewalks in front of our house and street” [2];

“Thank you for being interested in [the] safety and health of our children!” [2]; and

“Excellent program – good luck!” [2].

“This is a great idea, both to benefit our kids and the environment; however, a crucial component that is missing is educating the public... I realize there is no money allocated in the grant for this; however, this could be publicized in the Amherst Bee, Buffalo News fliers, etc. Main Street in Williamsville is so pedestrian unfriendly it is essential to educate the public to help ensure the safety of our kids” [2].

Bussing

Many parents expressed concerns about the school district’s bussing system. One parent noted that “[My child’s] bus route is too long and gets [the] kids to school late,” [2] Parent respondents propose shortening bus routes. One parent specifically said, “I think bus routes should be made shorter and less time-consuming” [2]. A factor that has extended the length of bus routes is that the WCSD will bus any child who resides within the district to any school within a 15-mile perimeter of the closest bus stop to their home, including students that attend schools outside of the district [3].

The support of parents and caregivers is crucial for the success of the “Kid Corridors: Taking Steps to School” plan. By understanding concerns that the adults in the community have, and what they would like to see implemented, the Town can address these issues in an effort to enhance walkability and promote active commuting for youth.

2 - Stakeholders



Active Commuting Stakeholders in the WCSD

In addition to parents and children in the WCSD planning area, a number of organizations and agencies are involved, or can be involved, in facilitating children's active commute to school (see Figure 2.2). The following describes these key stakeholders, many of whom are identified as key actors in the recommendations section of this plan – and will play a critical role in implementing the recommendations outlined in this plan.

Figure 2.11: Current Stakeholder Organizations

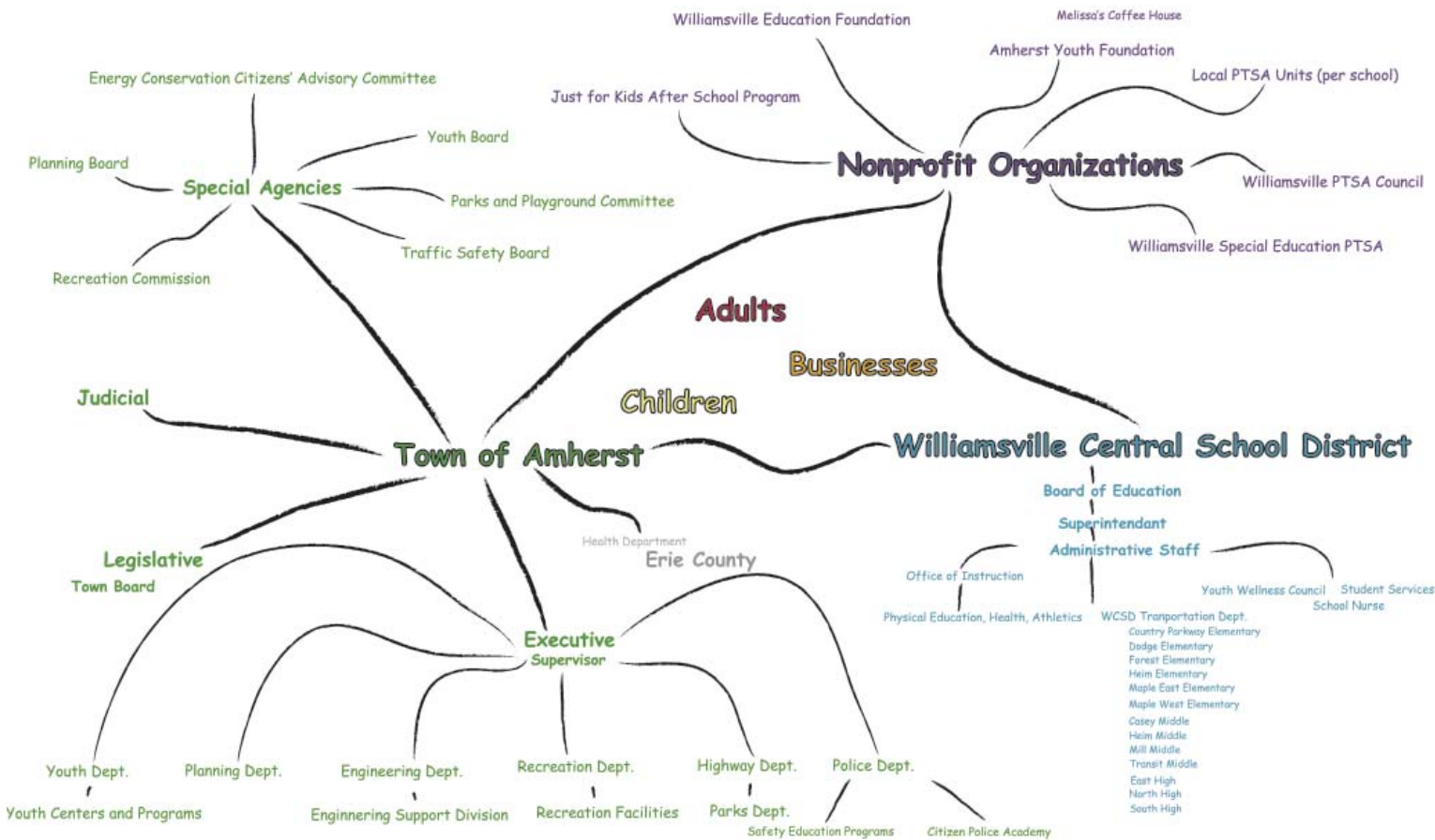


Image Source: Kid Corridors

A key player in facilitating children's walk to school, the WCSD is the largest suburban school district in Western New York and encompasses 40 square miles including portions of the towns of Amherst, Clarence and Cheektowaga [4]. The WCSD is one of three districts within the Town of Amherst. The district has 13 schools including six elementary schools, four middle schools, and three high schools.

Governing the WCSD is the Board of Education, a nine-member Board elected by residents of the district. The Board is responsible for developing policies under which the district is managed. The administrative and supervisory staff

is responsible for carrying out the Board's policies in the WCSD. The chief administration officer, the Superintendent of Schools, is responsible for ensuring that all support staff carries out the policies, programs, decisions and actions of the Board. [4].

Within the WCSD, there are nine departments. Of particular interest to this report is the Curriculum and Instruction Office that maintains the instructional program. Guided by the New York State Learning Standards and assessments, the Office has articulated grade level curricula for all content area disciplines, including Physical Education and Health. Please refer to Chapter 3 for the importance of daily physical activity and gaining healthy habits at a young age.

The Transportation Department provides bus service to over 12,500 students who attend more than 100 schools. The WCSD provides bus service for all students living in the district boundary, this level of service exceeds the New York State mandate which requires bus service for elementary and middle school students living more than two miles from school. In addition, the WCSD, in accordance with state law, will bus resident students up to 15 miles outside of the district to other schools and districts.

The Wellness Program is a product of the Student Services component of the WCSD. The Williamsville Youth Wellness Council, a 23-member committee of parents, students, teachers, community members and administrators, works to provide the necessary resources to prevent behaviors that interfere with a student's development and provide support services to assist all students in their development. Programs vary within the district schools; however, the council has provided guidelines through an asset model of positive youth development. The Wellness Council released a report with many recommendations, including the continued collaboration with the Amherst Task Force (part of the Amherst Youth Department), the Amherst Youth Board, and other stakeholders for youth development in the Amherst community [5]. The Amherst Task Force for Healthy Communities and Healthy Youth (Task Force) is a group of teachers, parents, town leaders and residents who collaborate to support positive youth development. The goals of the Task Force include encouraging communication between schools and partnering with youth to develop a healthy community.

While not directly affiliated with the WCSD, the National Parent Teacher Association (PTA or PTSA) is the largest volunteer child advocacy association in the United States [6]. The Williamsville PTSA Council works in conjunction with the local units, PTA's and PTSA's at the school-level, to provide leadership and help build stronger, more effective units [7]. In addition to the PTSA, Williamsville has a Special Education Parent-Teacher-Student Association (SEPTSA).

2 - Stakeholders



Another non-profit in the Williamsville community is the Williamsville Education Foundation (WEF). WEF's mission is to gather and administer private resources to enhance the educational activities of the WCSD and to help ensure that its students receive the highest level of education. The WEF has provided mini-grants to teachers and schools to provide funding for programs the district does not cover [8]. The WEF's Board of Directors has a designated member from both the WCSD Board of Education and Administrative Staff.

As stated above, the WCSD works in conjunction with the Town of Amherst [9]. The Town is comprised of four branches: executive, legislative, judicial and the special agencies branches [9]. For the purposes of this report, special attention will be paid to the executive, legislative and special agencies branches.

The executive branch consists of the Supervisor, the elected chief executive officer of the Town. The Supervisor is responsible for the administration of the Town affairs and law enforcement. The executive branch also consists of all departments in the Town government, including the Engineering, Police, Recreation, Planning, Youth and Highway departments [9]. The following departments either are, or could be, stakeholders in active commuting for youth:

- The Engineering Department assists residents, manages construction projects and maintains infrastructure. The department consists of four divisions, including the Engineering Support Division [10]. The Engineering Support Division, among other responsibilities, oversees construction management.
- The Police Department works to maintain a "proactive approach to resolve all public safety concerns and quality of life issues" in the Town [11]. The Police Department maintains many programs and services pertaining to active commuting, such as the Safety Education Programs and the Citizen Police Academy.
- The Highway Department is responsible for, among others, snow and ice control, road/curb maintenance, traffic lights and road signs, and street lighting. The Highway department also maintains the trails and map of the Town's multi-use trail system, a part of the Parks Department housed within the Highway Department. The Parks Department is also responsible for the maintenance of trees, grass, and park fixtures and structures [12].
- The Planning Department is responsible for long-range planning, development plan review, community development and program implementation. The Planning Department updates the comprehensive plan every five years as well as maintaining additional Town plans [13].
- The Recreation Department runs a variety of programs for the community. The department manages many facilities, including the Pepsi Center, the Clearfield Community Center and the North Amherst Recreation Center [14].
- The Youth Department provides services to children and youth throughout the Town. Programs provided by the department include the Boys and Girls Club of Buffalo, the Clearfield Youth Center and the Williamsville Youth Center. The Youth department partners with the Amherst Task Force, the Youth Foundation, the Youth Board, Amherst for Kids and many others [15].

The legislative branch primarily consists of the Town Board. The Board consists of the Town supervisor and five elected councilpersons. The function of the Board is to create legislative policy, or write laws, and to provide oversight of the executive branch [9].

The special agencies branch consists of “boards, commissions, committees, councils, bureaus, officers or other agencies of the Town which...enjoy a special measure of autonomy” from the other three branches of government [9]. This branch consists of, but is not limited to, the Planning Board, the Traffic and Safety Board, the Recreation Commission, and the Youth Board. The following entities are, or could be, stakeholders in active commuting for youth:

- The Youth Board is made up of 23 adult and youth volunteers. Members are appointed by the Town Board and “participate in decisions affecting programming, policies, funding and public relations for youth programs and services” [16].
- The Energy Conservation Citizens Advisory Committee provides guidance to the Town Board on matters pertaining to energy consumption, and advocates projects that control energy costs and support the Mayors Climate Protection Agreement[¶] [18]
- The Parks and Playgrounds Committee focuses on enhancing the quality of life in the Town. The committee functions as a resident, volunteer, advocacy organization for the parks and playgrounds of the Town [19].
- The Planning Board consists of seven members appointed by the Town Board. The Planning Board has the power to, among others, review and approve coordinated sign plans and participate in the development of comprehensive plans [20].
- The Recreation Commission maintains a relationship with the Town Board, the Recreation Department, activity volunteers and the varied recreation activities and programming in the Town [21].
- The Traffic Safety Board advises the Town Board on matters of traffic safety, including those pertaining to bicycles and pedestrians [22].

As previously stated, public participation is essential to the success of any plan. The following chapters of the report incorporate the information collected from the Town and WCSD stakeholders. By incorporating the visions and ideas of the stakeholders with key barriers and opportunities identified in the Town (see Chapter 8), and encouraging partnerships between existing entities, we have developed recommendations that support active commuting for youth in Amherst. The following chapter will review the current literature pertaining to active commuting for youth—identifying trends, benefits and barriers.

[¶] The Mayors Climate Protection Agreement is a document signed by 1015 United States mayors vowing to reduce carbon emissions in their cities below 1990 levels [17]. *Climate Protection Center*. 2009 November 11, 2009]; Available from: <http://www.usmayors.org/climateprotection/revised/>..



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Active living, as a lifestyle, is one approach that planners, health professionals, and community leaders are using to address environmental, health, and transportation concerns, on local and national scales. This review synthesizes literature dealing with questions “why *should* children be physically active?” and “why should children *want* to be physically active?” Ultimately, it establishes the benefits of, and barriers to, active commuting for youth. This review of literature informs the recommendations of this plan for active commuting by children in the Williamsville Central School District and the Town of Amherst.

Table 3.1: Percentage of Children that Commute Actively to School

Year	%
1969	42%
2001	15%

Data Source: U.S. Centers for Disease Control and Prevention

Active living is a way to integrate physical activity into daily routines. Active commuting, or active transportation, is one component of active living. For active commuting to occur, individuals must be *willing* to walk and bicycle. Good active transportation policies encourage children to walk or bike to school, make active transportation safer and teach valuable health and long-term behavior lessons [1]. However, of the 10,012 federally funded projects aimed at increasing pedestrian and/or bicycle transport between 1992 and 2004, only 2% were safety and education programs (94% were physical facility-related projects) [2]. Trends, such as a decrease in the number of children that walk to school, are correlated with several factors, such as the quality of the built environment, parental perceptions, lifestyle preferences and cultural differences.

Active Commuting Trends Among School Children

Today, the number of children walking or bicycling to school in the United States has decreased dramatically. A nationwide survey in the mid-nineties found that 65% of children were either driven to school by private automobile (51%) or rode the bus (14%), the remaining 35% either walked or rode their bicycles [3]. A recent longitudinal study points to a dramatic decline over time: between 1969 and 2001 the percentage of children that walked or bicycled to school have decreased from 42% to 15%, respectively [4].

While the rate of active commuting among children is decreasing overall, this trend varies considerably by age, race/ethnicity, income, and educational attainment of children and their families, as described below.

Age

Age is a significant factor in whether people choose to walk or bike [5-13]. Rates of active commuting vary by age. Studies report that children 5 years-old and younger are more likely to be driven than they are to walk to school [14]. Another study found that middle school students are more likely to walk than high school students [15].

3 - Literature Review



Gender

Research suggests that boys are more likely to walk than girls [14-16]. This difference could be attributed to the differences in perception of safety among female children. Timperio found that girls are more likely to report a fear of strangers than boys. When children were asked about their parents perception of safety, a greater proportion of female respondents reported their parents were fearful for their safety as compared to male respondents [17]. Adult women also perceived the lack of safety as a deterrent for engaging in physical activity (Day, 2006; Richard R. Suminski, 2005).

Race/ethnicity

Rates of active commuting to school are higher among African Americans and Latinos (as compared to white children) [18], although African American and Latino children are less physically active overall [19]. Pont's review of the literature also reports that children from a non-white minority background are more likely to use active transportation [20].* Research attributes these differences in active commuting rates to socioeconomic factors such as a lack access to automobiles [23].

Educational Attainment

Research suggests that the rates of children actively commuting are lower among households with higher educational attainment levels [15, 16]. This could be attributed to the fact that households with higher educational attainment levels also have greater economic resources (i.e. cars) to enable driving children to school. These households also had less time due to busy work schedules to supervise their children on a walk or ride their bicycles to school.

Benefits of Active Commuting

The World Health Organization recommends that school-aged youth get at least 60 minutes of moderate to vigorous physical activity every day [24]. Children who walk or bicycle to school are more likely to reach daily-recommended activity levels [18]. Benefits from increased physical activity include healthy development of the musculoskeletal structure and cardiovascular system, maintenance of a healthy body weight, and psychological benefits that can help control anxiety and depression [24]. Youth also benefit from active commuting by gaining self-confidence as a result of greater social interaction. Children that engage in regular physical activity regimens also have higher levels of academic performance [25].

Additionally, neighborhood safety and walking programs engage residents and create networks between neighbors. Connections among neighbors and the facilitation of community improvements was found to be an additional benefit of active commuting [24, 26]. The benefits to youth include the aforementioned

* Overall physical activity (which includes leisure activity) levels are lower among racial/ethnic minority populations

Research has shown that the rates of children actively commuting are higher among households with higher educational attainment levels

Figure 3.1: A Child Walks to School



Image Source: www.gettyimages.com

social benefits, as well as an increased awareness of their surroundings, allowing the children to make informed decisions about their route choice. Residents, parents and neighborhood business owners benefit from more inclusive community networks and new social connections.

A small body of scholarship suggests that an increase in active commuting may yield some environmental benefits. Although direct research on the links between the quality of environment and levels of active commuting is limited, one study reports that neighborhoods that scored higher on a walkability index[†] were also sites of greater active transportation among residents, and lower levels of emissions in the air [27]. While the research does not yet prove the connection between infrastructure and emission levels, it invites further study to examine the issue.

Figure 3.2: An Active Neighborhood Space



Image Source: www.gettyimages.com

...people want to be where other people are...

An additional benefit of active commuting is the potential to make streets, and therefore places, more vibrant and enticing. The research done by William Whyte in the 1970s suggests that people want to be where other people are [28]. In addition, aspects of the physical environment, such as sidewalks, parks or benches, determine which places people want to be and can therefore create a critical mass [29]. Leinberger states that as the “critical mass” of pedestrian scale use becomes available, more people will be out on the street, property values will rise, and the community will feel safer. By creating a safe, walkable environment, pedestrian critical mass can be achieved. One can conclude that if there is a critical mass of people actively commuting to school, then the rates of active commuters will rise. If this occurs, then all participants will also receive all of the benefits mentioned above.

Barriers to Active Commuting

Children in the United States face numerous and complex barriers that limit them from walking to and from school. Some barriers are physical, while others are perceptual. According to a survey administered by the U.S. Centers for Disease Control and Prevention, parents identified one or more of the following barriers as preventing their child from actively commuting to school: distance to school (61.5%), traffic related danger (30.4%), weather (18.6%), crime related danger (11.7%), opposing school policy (6.0%) and other (15.0%) [30]. In this review, we classify barriers to active commuting into four categories: the physical and natural environments, concerns for safety, school-related factors, and lifestyle factors. Below we discuss these, and other, barriers that hamper children’s ability and willingness to commute actively to school.

In discussing these barriers, it is important to recognize that these barriers are inter-linked, with feedback loops. These feedback loops make it essential that we address the barriers as a whole, any programs or policies implemented to address active commuting must acknowledge – if not tackle - all contributing barriers.

[†] A walkability index ranks neighborhoods on the basis of one or more build form features that facilitate walking. These features include availability of sidewalks, development density, and land-use mix.



The Built and Natural Environments

The built and natural environments pose various challenges to active commuting. Particular features of the physical design of neighborhoods may dissuade children from walking from home to school. Many neighborhoods are simply no longer ‘walkable.’ Walkability is a measure of how friendly a street is to pedestrians. This measure includes factors such as the existing infrastructure (sidewalks, streetlights, density) and safety; some neighborhoods are more walkable than others. Lawrence Frank studied five variables of the built environment, including residential and intersection density, land use mix and commercial and recreational spaces, and found that all had an impact on walking [31]. One study showed that children of parents who reported walking and biking facilities as being available are more likely to walk/bike than children whose parents did not identify pedestrian or bike-friendly infrastructure in their neighborhoods [32]. Changes to the built environment over time, development of lower density neighborhoods with limited or no availability of sidewalks and bike paths, limits people’s ability to travel using active means.

A study by Davison concludes that children are more likely to walk to school in the presence of controlled street intersections and where direct routes from home to school are available [18]. Schlossberg reports that children are more likely to walk where there is high intersection density and fewer dead-end streets [33].

Other studies have suggested that proximity to and availability of recreation areas, parks, open spaces, or play structures is associated with greater levels of physical activity among children [31, 34-38]. Robin Moore argues that variety in the landscape is more appealing to children, implying that children like to design their own routes and find their own special places [37]. Frank reports that proximity to recreation and open space is the dominant urban form variable that encourages active commuting [31]. Overall, people that live in neighborhoods with high “walkability” scores are reported to have higher levels of physical activity[‡] [39].

One may speculate that the regional setting of children’s residential location – rural, urban, or suburban – influences children’s level of physical activity. This is certainly possible since studies suggest that obesity rates among youth in rural areas are higher than those in urban areas[§] [40, 41]. Yet, a systematic literature review by Pont finds no significant direct association between childrens residential location (as it pertains to urban vs. rural) and active rates of transportation to school [20]. Overall, the research is inconclusive on whether living in urban, suburban or rural settings affects the rates of physical activity, or active transportation, among children. Discussions suggest that socio-economic status associated of rural residents, such as low-income levels, low levels of educational attainment and unhealthy food choices, are associated with higher

[‡] A variety of land use mixes, including residential density, mixed land use, and street connectivity, are key components of walkability and contributed to the walkability score.

[§] It is important to understand that much of the literature addressing active living stems from issues of public health, such as rates of overweight and obese children.

Weather is an often-cited factor of the natural environment that limits children ability and/or willingness to walk, especially in cold-weather climates

Figure 3.3: Snow Covered Streets



Image Source: www.gettyimages.com

Figure 3.4: Child Approached by Strangers



Image Source: www.gettyimages.com

levels of overweight/obesity rates [40]. Regional variations in physical activity, or active commuting, among children, may be simply a proxy for other factors discussed in this section.

Weather is an often-cited factor of the natural environment that limits children ability and/or willingness to walk, especially in cold-weather climates. Schlossberg notes that weather is reported as a barrier by parents (Schlossberg, 2006). In fact, the CDC survey cited at the beginning of this chapter found that 18% of parents identify weather as a barrier that limits active commuting for their children. (Parents ranked weather as the third barrier to active commuting, behind distance to school and traffic safety.) However, commuting in poor weather is a matter of comfort, not of access, and therefore must be addressed by changing behavior or perception, not by making physical improvements [33, 42].

In so far as other aspects of the natural environment are concerned, particular features of the landscape may be more desirable to children. David (2008) reports that children are more likely to walk to school when there are fewer hills, while Moore suggests that a complexity in the environment (natural and built) is more appealing to children[¶] [37].

Features of, or changes in, the built and natural environments alone do not determine whether children walk to school. Nonetheless, the design of built environment – and responding to challenges in the natural environment – may facilitate children’s ability to commute actively. Tsoukala suggests that children have a residence-centered perception of space (based on interviews and mental mapping) and that their “space” contains two primary points—their home and school [43]. Because of this, he suggests that the design of built environments should include child-friendly places that nurture the child’s socio-spatial integration, which could mean locating schools within residential neighborhoods [43].

Concerns for Safety

Concerns for safety [42] affect parents’ decision to allow their children to walk or bike to school, and their children’s willingness to do so [17, 26, 33, 43, 44]. These concerns for safety can be objective (a child may live in a neighborhood that lacks safety) and, or, perceptual (parents or children may perceive their neighborhood to be unsafe) – in either cases they can limit a child’s ability to commute actively to school. Parents report several safety-related concerns including dangers related to traffic as well as crime and stranger-related dangers [17, 26, 33, 42]. Traffic safety concerns include lack of road safety (sidewalks and shoulders), high traffic volume, and lack of infrastructure (missing sidewalks and bike lanes) [1, 42].

Parents’ perceptions of safety can differ from those of their children. Timperio reports that children, male and female, 10- to 12-years-in age, have a more

[¶] The purpose of Robin Moore’s study was to document children’s play, not active commuting per se.

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positive assessment of the safety of their neighborhood compared to their parents —children reported that the roads were safe, had low volume and that there were parks and sports grounds near where they lived [17]. In the same study, girls reported greater concerns about danger from strangers than the boys.

Overall, any initiative to promote active commuting must deal with the objective and perceptual concerns related to lack of safety for children.

School-related factors

Children also face barriers to active commuting as a result of school location, policies and procedures. Over the past 50 years, communities in the United States have been converting from smaller, neighborhood-based schools to fewer, larger schools located in areas of low density on the periphery of communities [45]. Changes in school locations can be attributed to lower land costs and larger lot sizes in the periphery [33]. Between 1940 and 2003, the number of public school districts decreased from 117,108 to 14,465, and the number of public and private elementary and secondary schools declined from over 226,000 to approximately 95,000 in 2003 [42, 46]. The physical infrastructure in the low-density, peripheral, newer locations is less walkable than infrastructure found near the traditional neighborhood school sites.

This consolidation of schools on the periphery of communities suggests that, on average, children today have to travel long distances to get to school. Not surprisingly, distance to school remains the primary reason children do not walk to school [17, 33]. A study by Schlossberg shows that students living closer to school are more likely to walk than students living farther away [33]. Specifically, the study found that 52% of students who live less than 1 mile from school walk home, compared to only 36% of those who lived 1 to 1.5 miles (36%) of their school, and a mere 4% of those who live more than 1.5 miles from school. Parental perception may have a role to play in how far a child walks to school. Parents report that a comfortable walking distance for a child is 0.9 miles for 5- to 6-year olds and 1.0 mile for 10- to 12-year olds [17].

Schools also require children to carry heavy books or materials home [33]. Walking with heavy materials makes it difficult for children to walk or bicycle long distances, especially for younger children and children with disabilities.

Children participate in school extracurricular activities [44]. This limits children from commuting actively to school because they must carry extra materials. Finally, some parents report the lack of school support in the form of school policies opposing active commuting [42] (such as prohibiting cycles to school) as a barrier to active commuting.

Figure 3.5: A Child with a Heavy Backpack



Image Source: www.gettyimages.com

Economics

Economic variables - such as income and access to assets - influence active commuting rates among children. Studies have shown that children from higher income households are less likely to use active means of transportation to school [16, 47, 48]. ** There are several possible explanations for this. McDonald, for example, found that children from low-income families are more likely to live within 0.5 miles of their schools, and therefore more likely to walk.

Higher incomes are also associated with higher access to personal automobiles, a mode of transportation that may be seen as a more convenient alternative to walking and bicycling to school by children and their parents. A review of the literature reports a significant negative association between the number of cars owned by a household and active commuting behavior among the children [20]. Children from households that own two or more cars have lower rates of active transportation than those that own one or no car [17].

Figure 3.6: A Parent Driving Their Children to School



Image Source: www.gettyimages.com

Lifestyle

Lifestyle factors are those that contribute to how people make their daily decisions about active commuting. For example, many parents state that active commuting to school is a time issue. Parents drive their children to school for convenience and because of time constraints [26, 33, 49]. Programs promoting active commuting must account for parents' time and make such travel options convenient.

Conclusion

What is clear from the literature is that the built environment, perceptions of the built environment, and lifestyles all provide linkages to active transportation decisions as they pertain to children. As programs and policies are implemented to support active transportation by youth, a review of successful programs will enhance the knowledge of the best practices for active commuting.

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** Studies have reported no relationship between physical activity and income in an *adult* population (when comparing high- vs. low- walkability in neighborhoods) [39]

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The Town of Amherst

This section provides contextual information about the Town of Amherst within which the Williamsville Central School District lies. The section describes the demographic trends, characteristics of the built environment, transportation patterns, and health and safety trends in the Town [1-3]. Raw demographic data obtained from the U.S. Census American Community Survey is available in Appendix E.

Demographics, Social Trends, and Economic Conditions

Population

The Town, a suburb of the City of Buffalo, is home to 119,015 residents. The Town's population is 13.08% of Erie County's population.

Age Distribution

The population of Amherst is distributed relatively proportionately across various age cohorts, with the oldest quartile (76+) being the smallest (see Figure 4.1 and Table 4.1). About 11% of the Town residents are between the ages of 5 and 14, the population sub-group that is likely to attend K-8 schools – and the target demographic of this plan. Compared to both Erie County and New York State, the Town has a higher percentage of residents younger than 25 years old and older than 75 years old (see Figures 4.2 and 4.3).

Age of individuals is a significant factor in determining whether, and how much, they choose to walk or bike [4-12]. A study of 4- to 7-year old children reports that physical activity levels are higher in older children [13]. A different study of 8- to 12-year olds found the opposite; the younger the subject, the more likely they are to be physically active [14]. Based on these and other studies, one can speculate that among very young children (5- to 9-years old) physical activity rates are positively correlated with age, while among older children (10 to 12 years old) physical activity rates are negatively correlated with age. Among adults, the older an individual, the less likely they are to be physically active.

Gender

The Town's gender composition is 50.72% female and 49.28% male. When considering the school going population (5- to 14-year olds), the gender distribution is similar: there are slightly more males than females in the Town (50.74% male to 49.26% female).

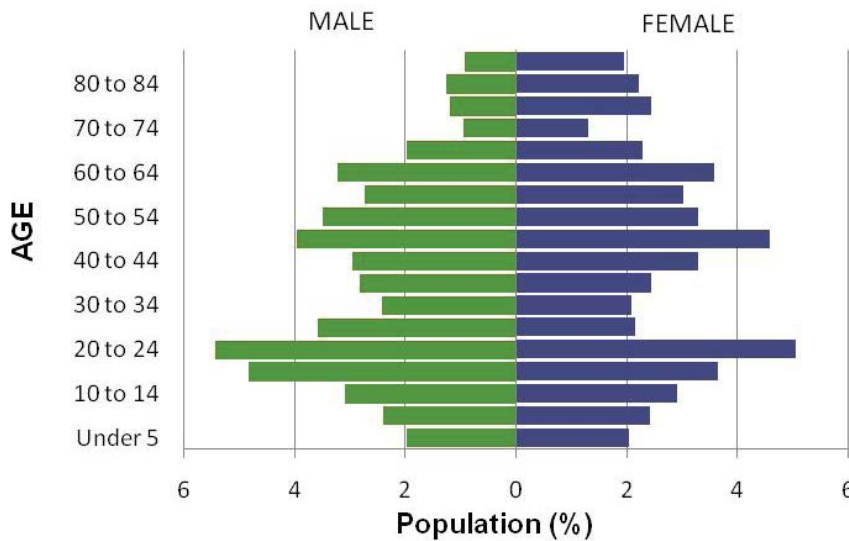


Table 4.1: Age Distribution of the Town of Amherst

Age Range	Percentage of Amherst Population (%)
24 years and younger	33.85
25 – 50 years	30.31
50 – 75	25.85
76 years and older	9.99

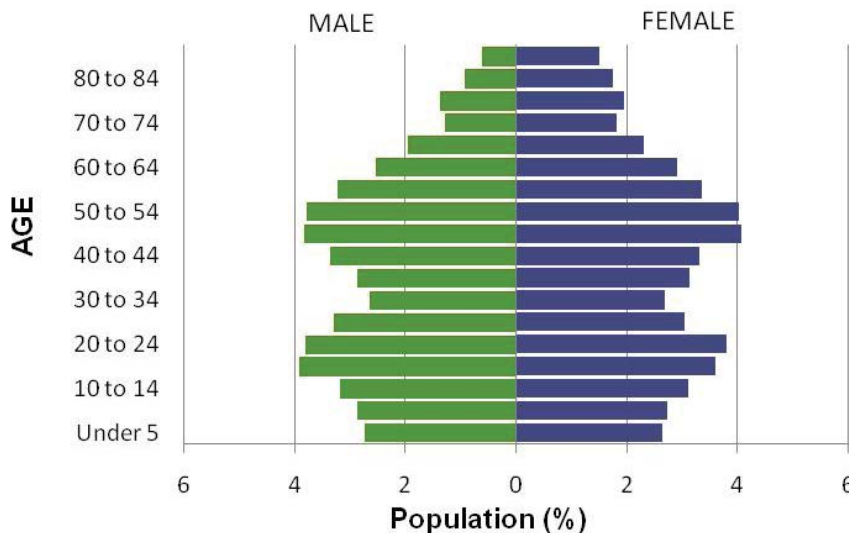
Data Source: American Community Survey 2008

Figure 4.1: Age and Gender Distribution of the Town of Amherst



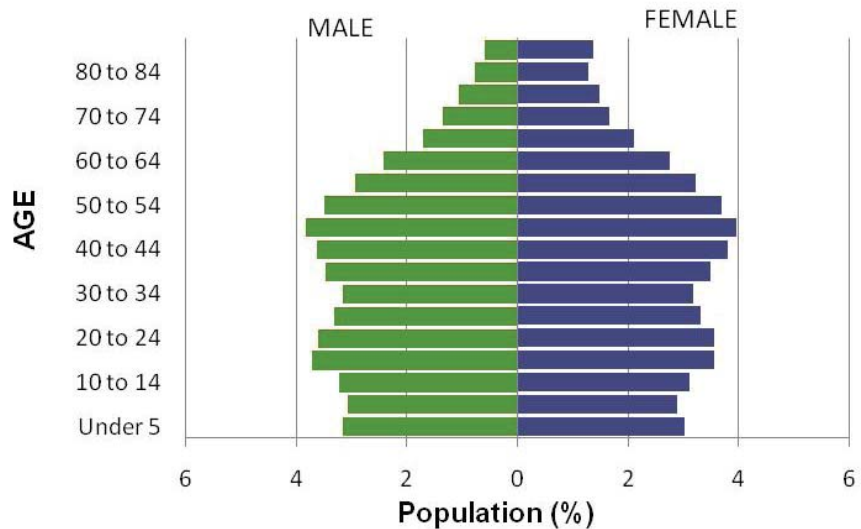
Data Source: American Community Survey 2008

Figure 4.2: Age and Gender Distribution of Erie County



Data Source: American Community Survey 2008

Figure 4.3: Age and Gender Distribution of New York State

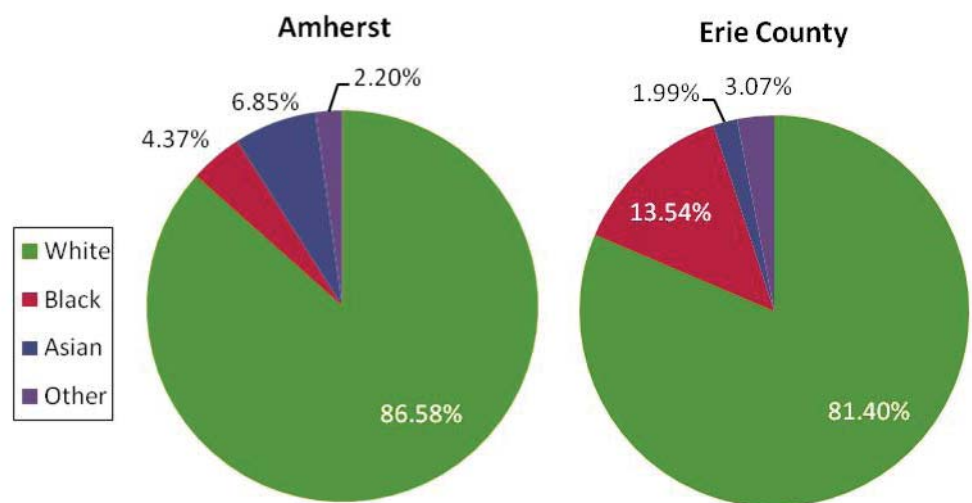


Data Source: American Community Survey 2008

Race

Similar to the County as a whole, the majority of residents (86.58%) in Amherst are Caucasian (see Figure 4.4). When examining racial distribution among children ages 5 to 14 in Amherst, the percentage of Caucasians drops slightly but is nonetheless large: 84.89% of children in Amherst are Caucasian (see Figure 4.5) – a population sub-group that is less likely to commute actively as compared to African Americans [7, 15, 16].*

Figure 4.4: Race Distribution of the Town and County

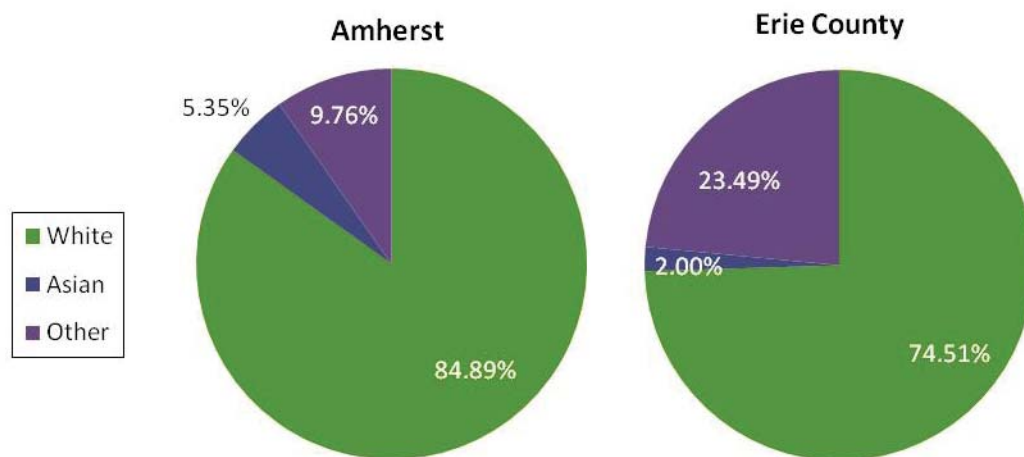


Data Source: American Community Survey 2008

* Data for the proportion of African Americans by age for the Town of Amherst was not available due to a small sample size.



Figure 4.5: Race Distribution of 5-14 Year Olds in the Town and County



Data Source: American Community Survey 2008

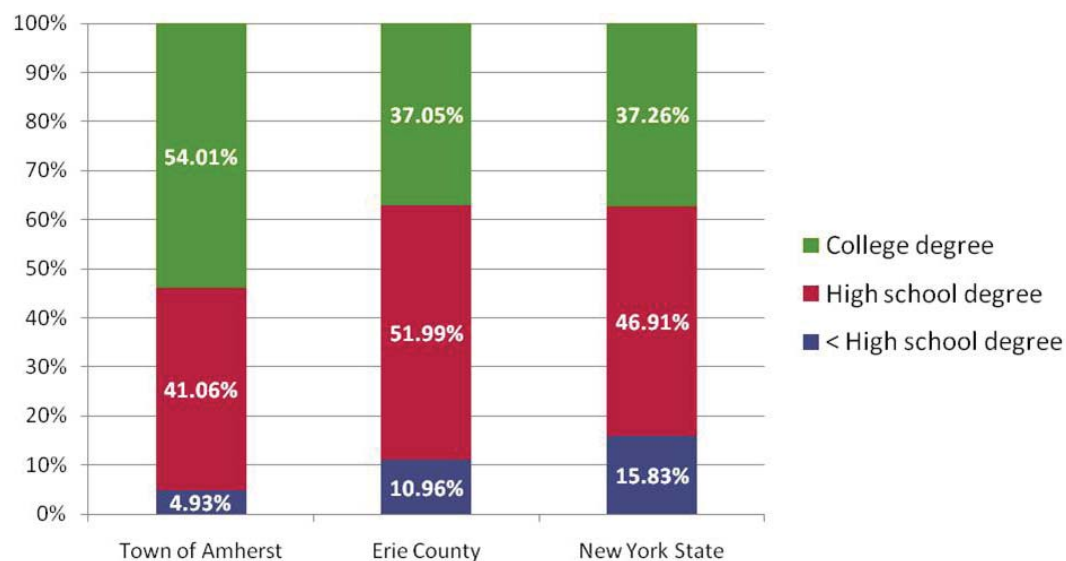
School Enrollment

In 2008, 11,653 children in the Town of Amherst were enrolled as students in kindergarten through 8th grade. Additional details on school enrollment for the planning area (WCSD) are available in Chapter 6.

Educational Attainment

The Town of Amherst is a well-educated community. Over 54% of the Town's population (18 years and older) have some level of college degree. The level of education in Amherst is higher than that of the surrounding county and the state (see Figure 4.6).

Figure 4.6: Educational Attainment for the Town, County, and State

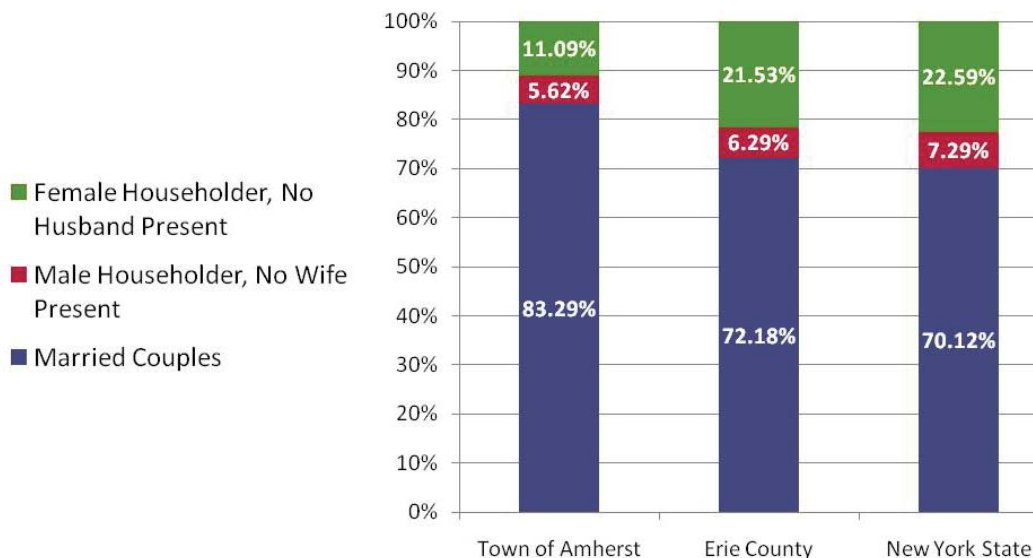


Data Source: American Community Survey 2008

Household Structure

The Town of Amherst is home to families with a traditional household structure of married couples. The majority (83.29%) of households are married couples, a higher proportion than in the surrounding county and state. Single women and single men head 11.09% and 5.62% of households, respectively (see Figure 4.7).

Figure 4.7: Household Type for the Town, County, and State



Data Source: American Community Survey 2008

Housing

Given the predominance of married couples in the Town, it is not surprising that single family detached housing is a common housing option. About sixty-five percent of housing units are detached single-family homes, a proportion higher than that in Erie County (56.62%) and the state of New York (41.80%).

The Town of Amherst has low housing vacancy rates. Only 2.08% of housing units are vacant, compared to 9.21% in Erie County and 10.53% in the state of New York. Of the occupied housing units in the Town, a majority (73.20%) are owner-occupied. This homeownership rate is higher than that of Erie County (66.41%) and New York State (55.52%).

Labor Force

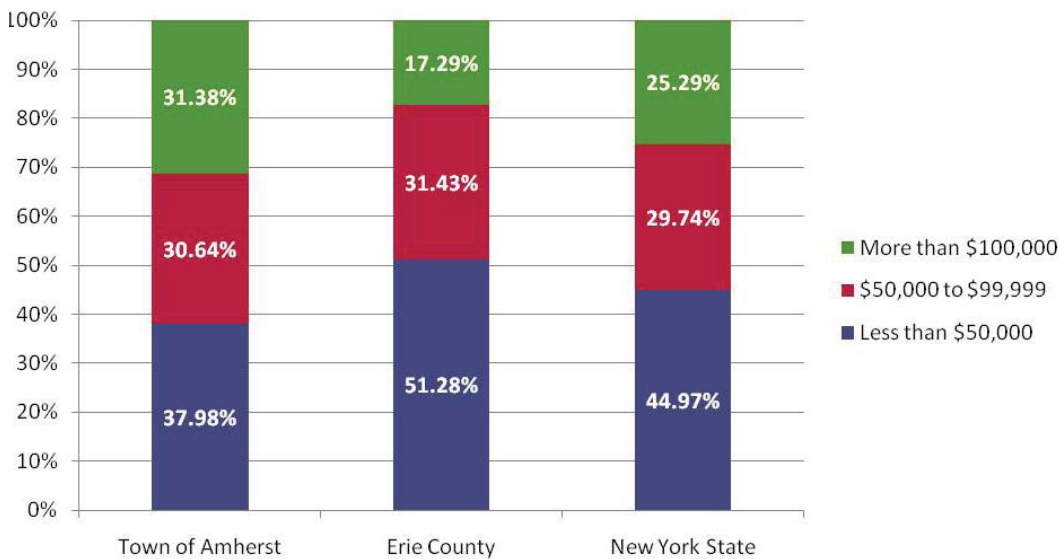
A significant majority (95.37%) of the town's labor force is currently employed. A small proportion is unemployed (4.5%), while the remaining (0.20%) is in the military. The Town has a higher percentage of employment compared to Erie County and New York State.



Household Income

Compared to Erie County and New York State, the Town is an affluent community. A sizable proportion (31.38%) of Amherst households earn more than \$100,000[†] annually. This is almost double the proportion of Erie County households who make that level of income (see Figure 4.8).

Figure 4.8: Household Income for the Town, County, and State



Data Source: American Community Survey 2008

Poverty

Not surprisingly, a relatively small percentage (8.22%) of Amherst residents live in poverty, especially when compared to Erie County (13.58%) and New York State (13.61%).

A small proportion of Amherst children, ages 5-14, experience poverty: only 2.68% of children, ages 5-14, live in poverty. Poverty rates among children in Amherst are much lower than in Erie County (18.42%) and New York State (18.87%).

Built Environment

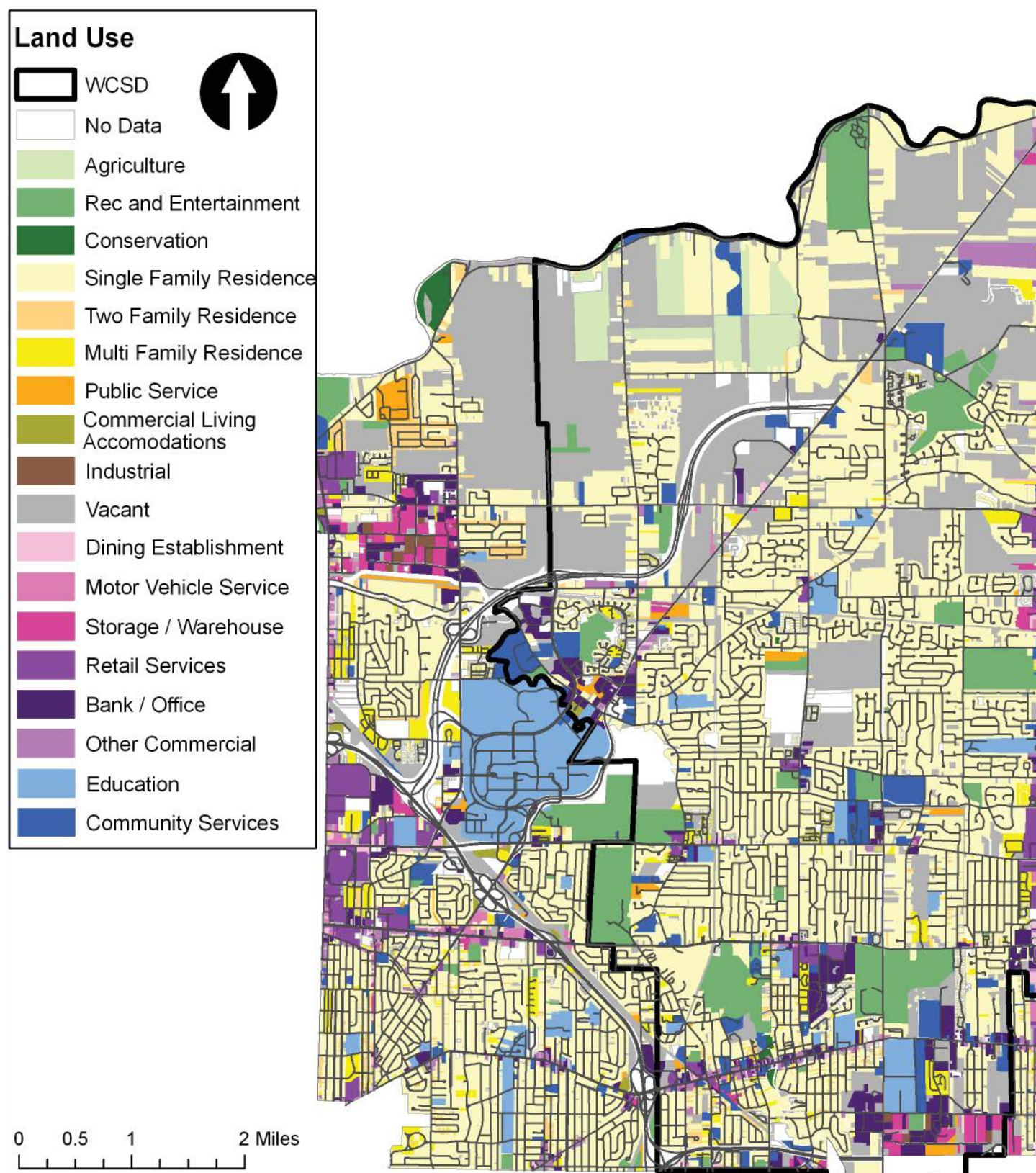
Land Use

Residential land use dominates in the town. Commercial parcels are located along major streets such as Niagara Falls Boulevard, Transit Road, and Sheridan Drive. The Town has fewer industrial parcels and these are located in the northwest section of the Town, while the northern section contains more vacant lots. The University at Buffalo North Campus encompasses a large portion of the geographic center of the Town. Large tracts of parks and conserved green areas are also available within the Town. There are 647.5 square feet, or an area of 25.5 feet by 25.5 feet, of parkland available per resident (see Figure 4.9).

There are 647.5 square feet, or about 25.5 feet by 25.5 feet, of parkland available per resident.

[†] In 2008 inflation adjusted dollars

Figure 4.9: Land Use by Parcel in the Town of Amherst



Data Source: Town of Amherst Engineering Department

4 - Context



The literature suggests that to be walkable, the built environment has to have a) a high residential density and b) a variety of land uses with destinations (for work or entertainment) within walking distance and is ideal for walking and biking [17-19]. However, the Town of Amherst has a relatively low residential density of 3.66 housing units per residential acre.[‡]

Furthermore, the land use mix in the Town is relatively homogenous. Using an index that measures land use mix on a scale of zero to 1, where zero indicates a perfect homogeneity of land use and 1 indicates a relatively even distribution of land across various land use categories, the Town of Amherst scores 0.48.[§] The index for the WCSD planning area is even lower (0.41) suggesting an even greater homogeneity in land use within the school district boundaries.

Sidewalks

Sidewalks are critical for a person to be able to walk throughout a neighborhood [6, 8, 19-21], especially for a school-going child. While a portion of Amherst's street network includes sidewalks, many sections, especially along the east side, do not (see Figure 4.10). There are 593 miles of sidewalk throughout the Town. This is barely half the length of roadway in Amherst which aggregates to 1119.16 miles. (see Table 4.2)

Many of the sidewalks along state routes are reported to be in bad to poor condition and in need of improvements. The majority of available sidewalks in good to excellent condition are located around and near the University at Buffalo North Campus.

There are 593 miles of sidewalk throughout the Town. This is barely half the length of roadway (excluding major highways) which aggregates to 1119.16 miles.

Table 4.2: Infrastructure Summary

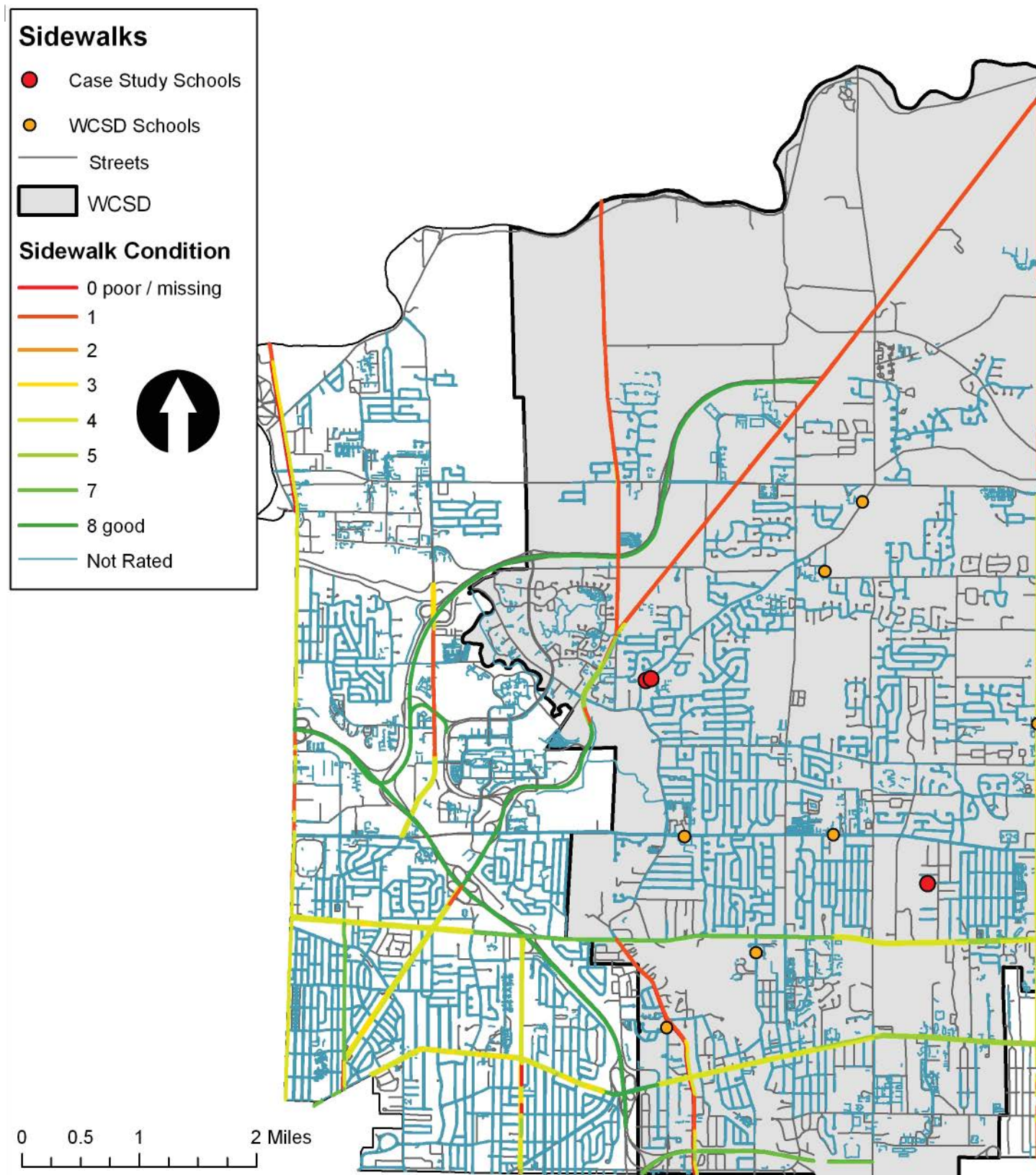
	Length in Miles
Roadway (excluding highway)	1119.16
Sidewalk	593.12
Bike Lane	19.88
Multi Use Trail	10.96

Data Source: Town of Amherst Engineering Department

[‡] Net residential density is calculated by dividing the total number of housing units by the total acres of land in residential use.

[§] Land use mix = $(-1) * [(acreage\ of\ commercial / total\ acreage\ of\ commercial,\ residential,\ and\ office) \ln (acreage\ of\ commercial / total\ acreage\ of\ commercial,\ residential,\ and\ office) + (acreage\ of\ office / total\ acreage\ of\ commercial,\ residential,\ and\ office) \ln (acreage\ of\ office / total\ acreage\ of\ commercial,\ residential,\ and\ office) + (acreage\ of\ residential / total\ acreage\ of\ commercial,\ residential,\ and\ office) \ln (acreage\ of\ residential / total\ acreage\ of\ commercial,\ residential,\ and\ office)] / \ln (3)$. [4]

Figure 4.10: Town Sidewalks



Data Source: Town of Amherst Engineering Department



Bike Lane and Multi Use Trail Network

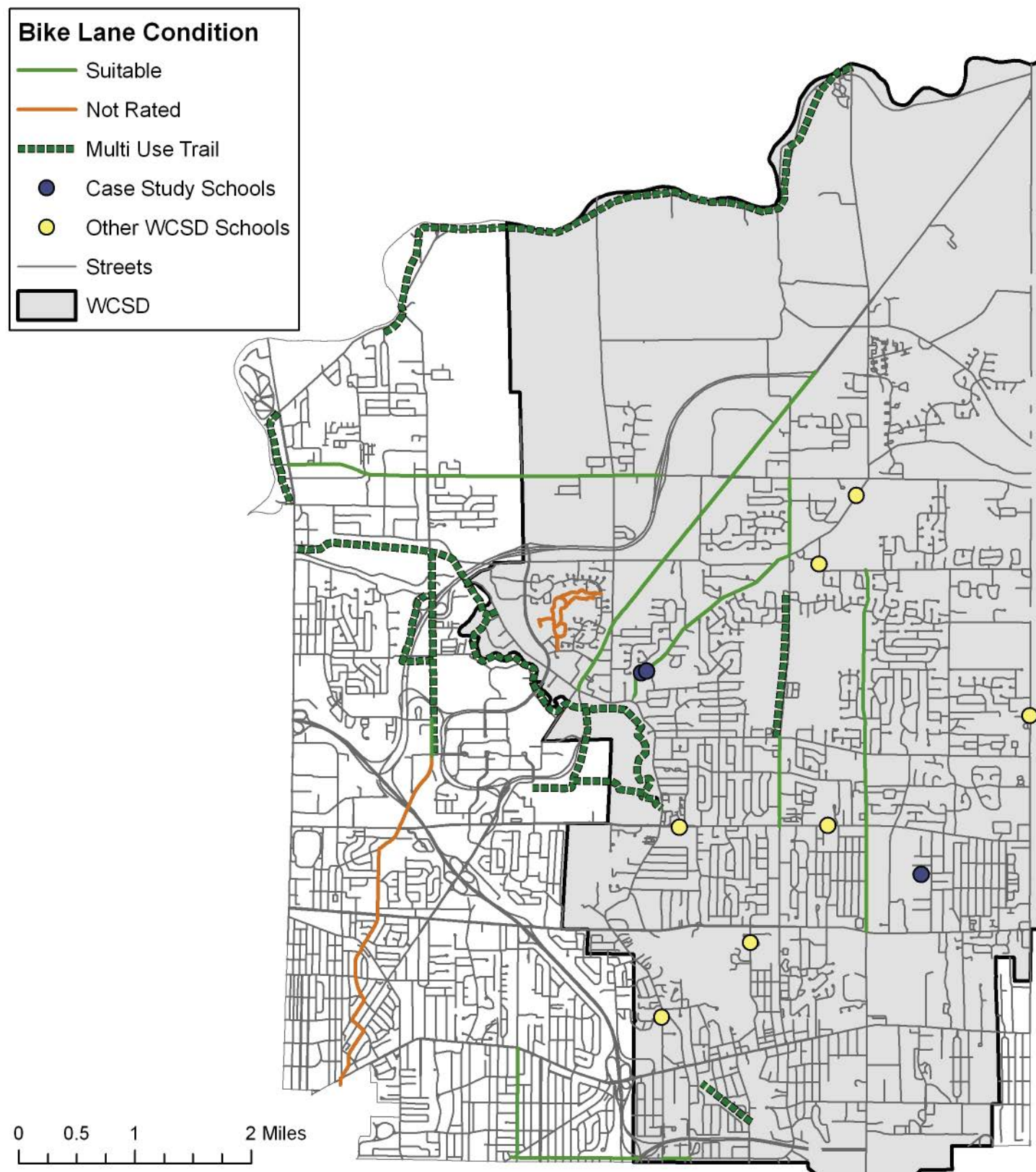
The Town's active commuting infrastructure includes a limited bicycle and multi-use trail network. There are only 19.88 miles of designated bike lanes in the Town (see Table 4.2). This is abysmal compared to the 1119.16 miles of roadway. The locations and condition of these bike lanes are shown in Figure 4.11.

In 2008, the Greater Buffalo Niagara Region Transportation Council (GBNRTC) designated certain roadways (including those in Amherst) as part of a Regional Bikeway Network (see Figure 4.11). The GBNRTC established a rating system for the bikeway network in its Bicycle Route Guide. This rating system simplifies the Bicycle Level of Safety (BLOS) by identifying whether the road is "suitable for riding," "caution is advised," or "extreme caution advised/ experienced cyclists only" [22]. All of the Town's road segments included in the Bicycle Route Guide are ranked as "suitable for riding." Several bike lanes, however, are not included in GBNRTC's Bicycle Route Guide.

Several multi-use trails exist in Amherst. These trails provide scenic, paved pathways for cyclists, walkers, and other users, and are separated from automobile traffic. Most of these trails link the Town with the Greater Buffalo Niagara Region. These trails include the Erie Canal Trail, which follows Tonawanda Creek, the Ellicott Creek Trail, which follows Ellicott Creek and meanders around the University at Buffalo North Campus, and the Hopkins Road Trail, which runs through the Great Baehre Swamp State Wetlands. Combined, these multi-use trails are only 10.96 miles long (see Table 4.2).

There are only 19.88 miles of designated bike lanes and 10.96 miles of multi-use trails throughout the Town.

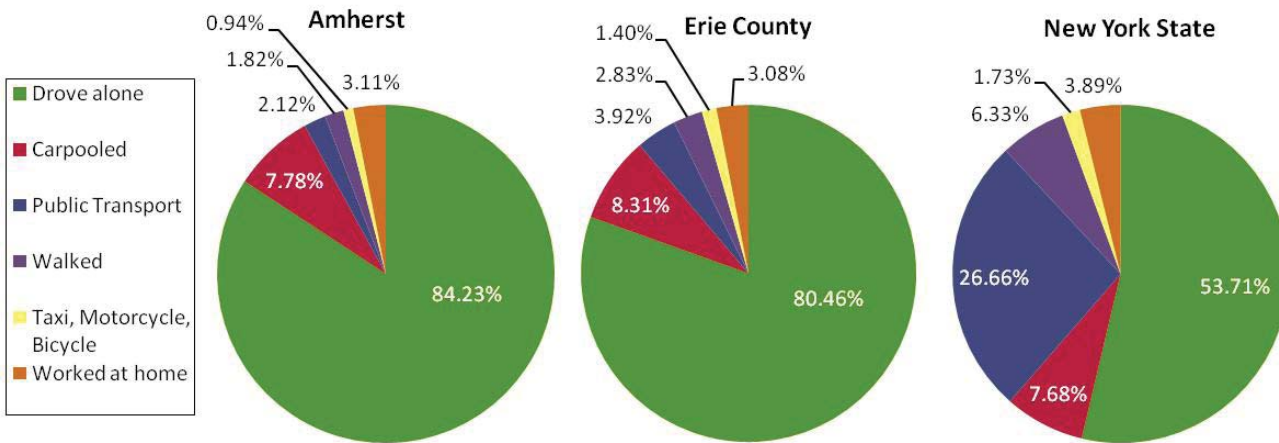
Figure 4.11: Bike Lane and Multi Use Trail Network in the Town of Amherst



Data Source: Town of Amherst Engineering Department



Figure 4.12: Mode of Transportation to Work for the Town, County, and State



Data Source: American Community Survey 2008

Transportation and Traffic

Availability of Vehicles

A majority (~98%) of Amherst residents who work also own a vehicle. This proportion is similar to workers' access to automobiles in Erie County (95%) but much more than in New York State (79%). As discussed in Chapter 3, people with vehicles are less likely to be physically active [5, 15, 23]. For those workers who are also parents, automobiles are a convenient means of transporting children to school.

Mode of Transportation to Work

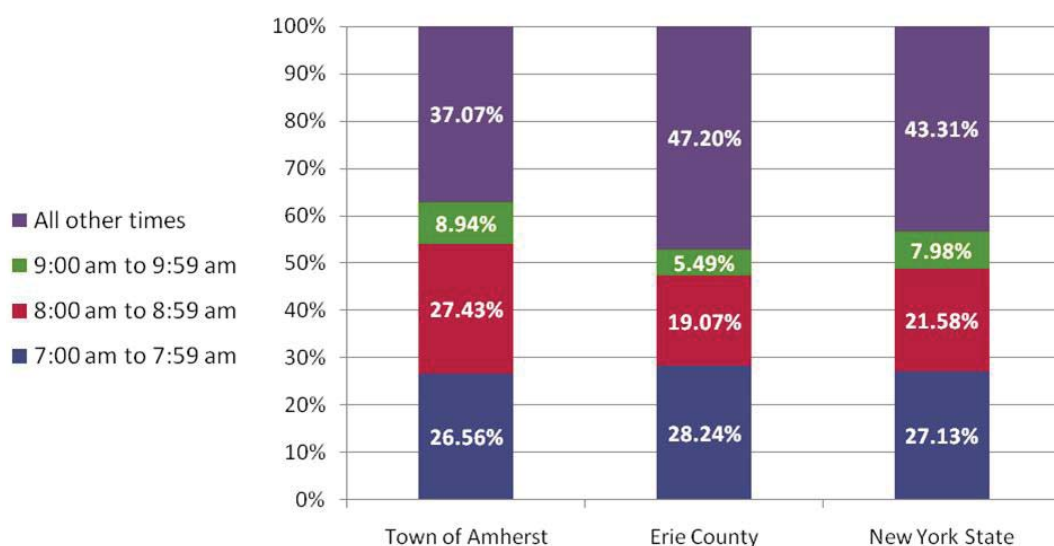
Mirroring commuting patterns in the county and the state, a very small percentage of Amherst residents walk or bike to work. A majority (84.23%) drive to work alone. This travel pattern of using "Single Occupancy Vehicles" (SOV) in Amherst is similar to countywide trends where 80.46% of workers drive to work alone but much higher than statewide rates (53.71%) (see Figure 4.12).

A majority of Town residents drive to work alone.

Commute Times for Workers (and School Children)

A significant portion (53.99%) of the Town's working residents leave home for work between 7:00 am and 9:00 am. (see Figure 4.13) The school day in the Williamsville Central School District (WCSD) begins between 8:15 am to 9:00 am depending on the school. However, students are permitted to arrive between 7:45 am to 8:45 am, depending on the school's start time. See Chapter 6 for a detailed account of children's commute patterns by travel mode.

Figure 4.13: Commute Departure Time for Town, County, and State



Data Source: American Community Survey 2008

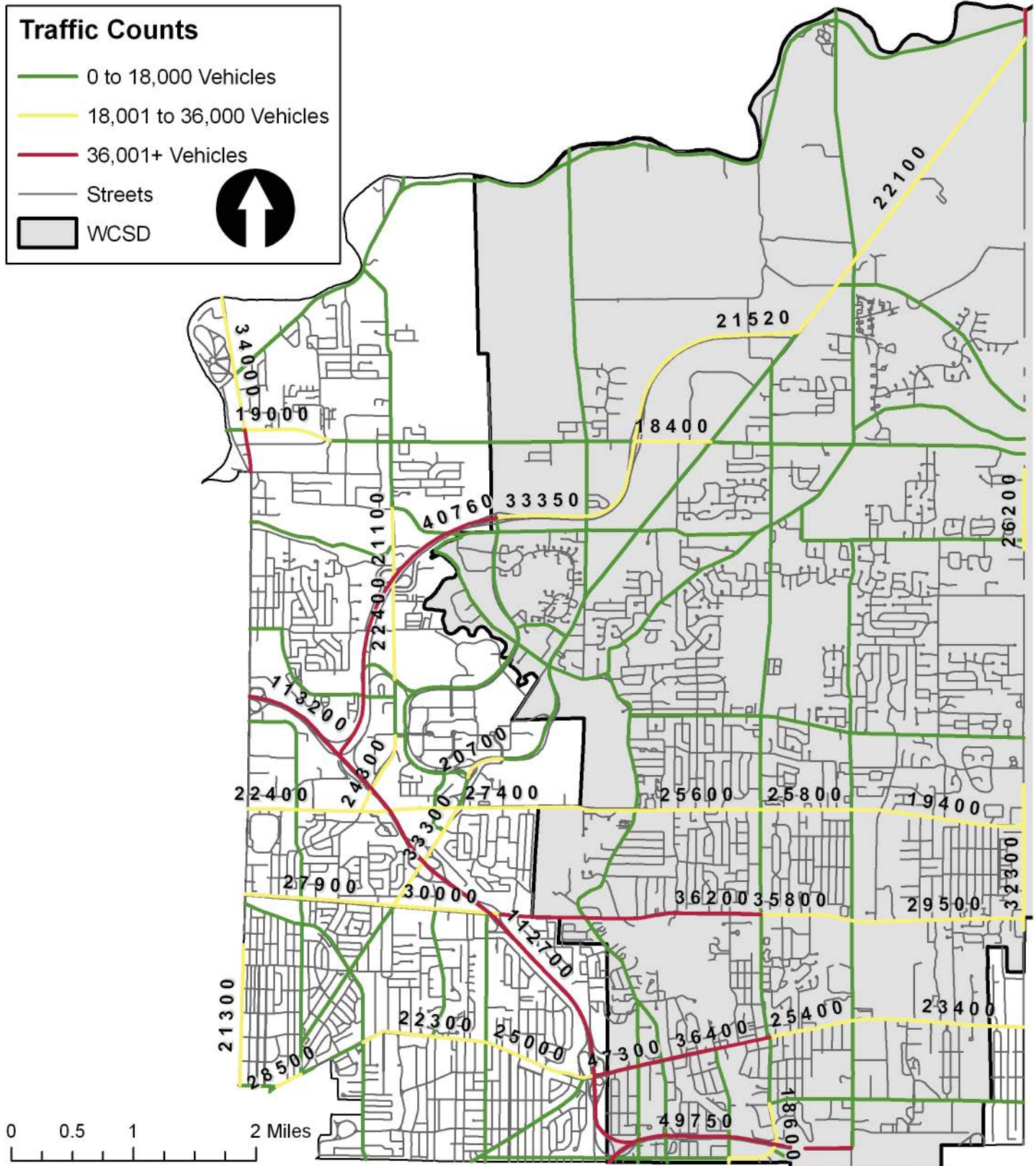
Traffic Volumes - Average Annual Daily Traffic

The average annual daily traffic (AADT) on many road segments in the Town of Amherst is less than 18,000 vehicles (see Figure 4.14). The exceptions are the I-90, I-290, I-990, Niagara Falls Boulevard, Transit Road, Maple Avenue, Sheridan Drive, and Main Street, which have a higher traffic volume.

Four lane road segments, with an AADT level of 12,000 to 18,000 vehicles, are excellent candidates for "Road Diets" [24]. Road Diets remove excess lanes or narrow existing lanes to make room for new pedestrian and bicycle infrastructure. According to AADT data, several streets in the Town, especially within the WCSD, have excess lane capacity and should be considered candidates for Road Diets.



Figure 4.14: Daily Traffic Counts Along Major Corridors



Health and Safety Trends

Ambulatory Disability

Only 4.78% of Amherst residents (5+ years old) have an ambulatory disability, i.e., difficulty in walking. Among children 5 to 17 years old, only 0.68% have ambulatory disabilities. This rate is lower compared to Erie County but higher than New York State.[¶]

Crime

The Town of Amherst is a relatively safe community. The Town experienced 141 violent crimes during 2008, of these crimes, zero involved murder. The majority of violent crimes were reported as assaults.

Compared to violent crime, property crime is more prevalent in Amherst. A majority of property crime is reported as larceny^{**}[25]. (see Tables 4.3 and Table 4.4)

Table 4.3: Violent Crime in Amherst - 2008

Population	Total	Murder	Rape	Robbery	Assault
110,351	141	0	2	45	94
<i>rate/100,000</i>	128.2	0.0	1.8	40.9	85.5

Data Source: Federal Bureau of Investigation's Uniform Crime Report

Table 4.4: Property Crime in Amherst - 2008

Population	Total	Burglary	Larceny	Motor Vehicle Theft	Arson
110,351	2,082	206	1,819	57	8
<i>rate/100,000</i>	1892.7	187.3	1653.6	51.8	7.3

Data Source: Federal Bureau of Investigation's Uniform Crime Report

¶ The 2008 American Community Survey reports data for ambulatory disabilities for 5 to 17 year olds but not for 5 to 14 year olds as used throughout this rest of this section.

** The Federal Bureau of Investigations compiles yearly Uniform Crime Reports (UCR) for the Nation, State, and local agency geographic level. The Bureau discourages crime rate comparisons between different geographic areas.

4 - Context



Bicycle and Pedestrian Crashes with Motor Vehicles

Between September 15, 2008 and September 14, 2009, the Town experienced a small number (37) of crashes between bicycles/pedestrians and motor vehicles. This equates to 31 bicycle/pedestrian crashes per 100,000 residents. Most crashes involving bicyclists or pedestrians occurred in the summer (June, July, and August) (see Table 4.5)

Crashes involving bicycles and pedestrians in the Town occur throughout the week, although no pedestrian crashes were reported on Sundays. Most accidents occurred mid-week. (see Table 4.6)

Most crashes involving bicyclists/pedestrians occurred between the hours of 3:00pm and 5:59pm. This time frame when children return home from school. (see Table 4.7)

The average crash victims' age (both bicyclists and pedestrians combined) were in the low 30's (see Table 4.8).^{††} On average, bicycle accident victims were in their 20s, while pedestrian victims are in their 40s. It is important to note that among bicycle accident victims the most frequent cases are reported for individuals 15 years old. On average, drivers' age in both types of crashes is older (about 50 years old).^{‡‡}

The high crash rate areas in the Town are concentrated along the southern and central portion of Hopkins Road, and in a diagonal following the I-290 corridor (see Figure 4.15).^{§§} Sixteen of 37 crashes occurred in the Williamsville Central School District.

Table 4.5: Bicycle and Pedestrian Crashes with Motor Vehicles by Season

	Fall	Winter	Spring	Summer	Total Crashes
Bicycle	6	0	5	12	23
% of Total	75%	0%	50%	80%	62.16%
Pedestrian	2	4	5	3	14
% of Total	25%	100%	50%	20%	37.84%
Combined	8	4	10	15	37

Data Source: Town of Amherst Police Department

^{††} Note that some victims and drivers ages were not available due mainly to hit and run accidents. This analysis only includes victims and drivers whose age was reported.

^{‡‡} Median is the middle number in a sequential list of numbers, in this case ages of victims or drivers. Mode is the number which occurs most often, in this case the most common age to be involved in an accident.

^{§§} A Kernel Density Analysis shows concentrations of occurrences within a specific geographic area. It takes into account how geographically proximate the occurrences are, in this case, bike/ped crashes with motor vehicles.

Table 4.6: Bicycle and Pedestrian Crashes with Motor Vehicles by Day of the Week

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Bicycle	4	4	4	3	1	4	3
% of Total	67%	50%	50%	60%	50%	80%	100%
Pedestrian	2	4	4	2	1	1	0
% of Total	33%	50%	50%	40%	50%	20%	0%
Combined	6	8	8	5	2	5	3

Data Source: American Community Survey 2008

Table 4.7: Bicycle and Pedestrian Crashes with Motor Vehicles by Time of Day

	12:00-2:59 am	3:00-5:59 am	6:00-8:59 am	9:00 am - 12:00 pm	12:00-2:29 pm	3:00-5:59 pm	6:00-8:59 pm	9:00-11:59 pm
Bicycle	0	0	2	3	4	9	4	1
% of Total	-	-	50%	43%	50%	82%	67%	100%
Pedestrian	0	0	2	4	4	2	2	0
% of Total	-	-	50%	57%	50%	18%	33%	0%
Combined	0	0	4	7	8	11	6	1

Data Source: American Community Survey 2008

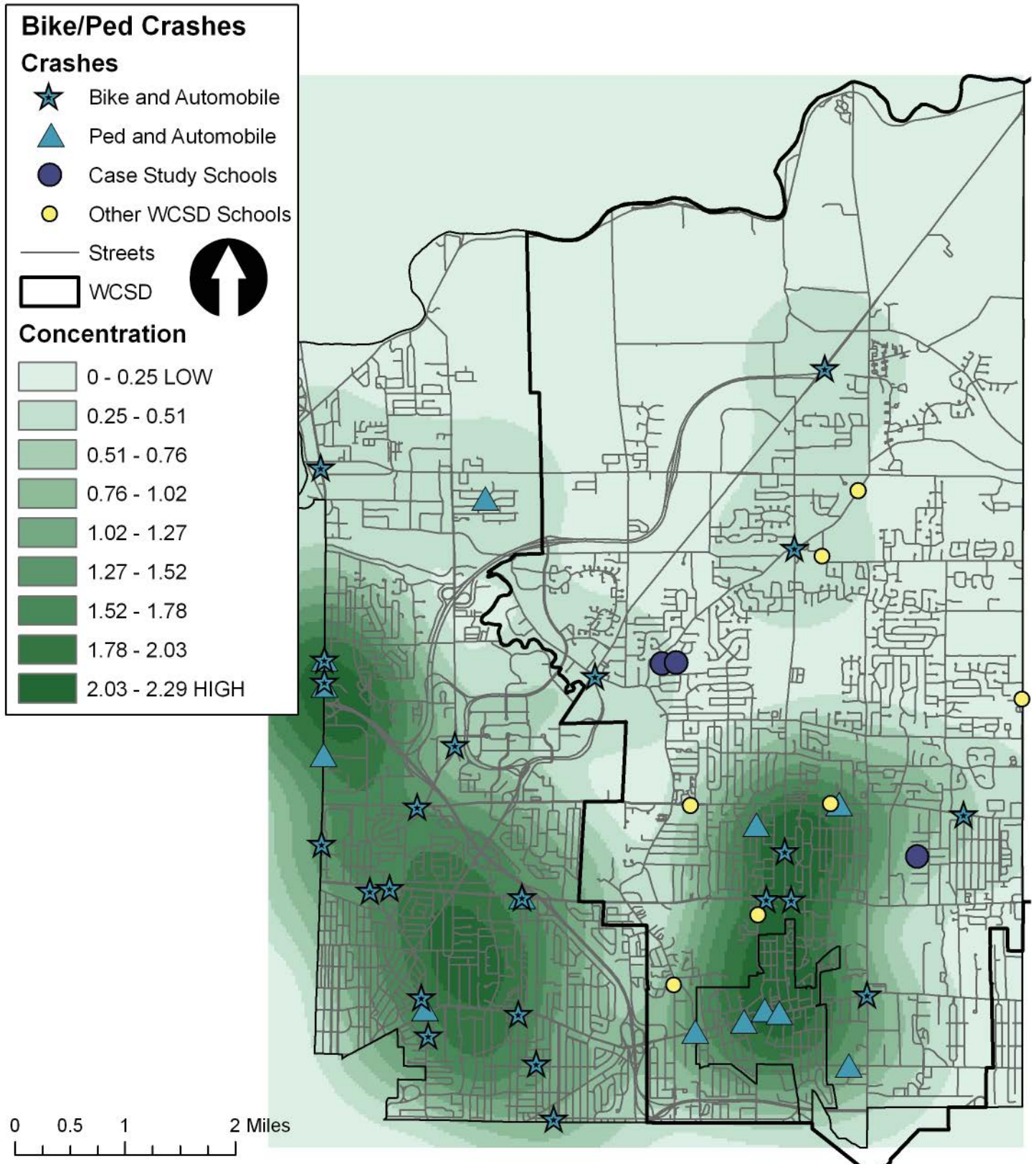
Table 4.8: Age of Individuals Involved in Crashes

	Victim's Age			Driver's Age		
	Average	Median	Mode	Average	Median	Mode
Bicycle	21.6	155	15	47.1	45	40
Pedestrian	44.7	48	48	55.6	55.5	-
Combined	30.3	20	15	50.5	48	39

Data Source: American Community Survey 2008



Figure 4.15: Density of Bike/Ped Crashes with Motor Vehicles



Data Source: Town of Amherst Police Department

Conclusion

The Town of Amherst's demographic and built environment factors offer some opportunities as well as challenges, for encouraging walking and bicycling among school children. The Town's residents are highly educated and understand the importance of encouraging physical activity among children. The population has a low percentage of ambulatory disabilities. The Town is a relatively safe community with low levels of crime and relatively few crashes involving bicyclists or pedestrians.

The Town boasts the beginnings of a bicycle lane and sidewalk network but the built environment offers some challenges. The development pattern is low-density with a relatively homogenous land use. Although there is a limited sidewalk network, many streets have low average annual daily traffic counts that could be considered for "road diets" to add to the Town's bicycle and trail network.

A review of the laws and regulations that affect active commuting are discussed in the next chapter. These laws shed light on the existing conditions in the Town of Amherst, and pave the way for understanding the commuting patterns in the WCSD planning area discussed in Chapter 6.

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Figure 5.1: Safe Routes to School Logo

SafeRoutes

National Center for Safe Routes to School



Logo Source: www.saferoutesinfo.org/

SRTS aims “to enable and encourage children, including those with disabilities, to walk and bicycle to school”

Figure 5.2: Children Crossing in a Crosswalk with a Crossing Guard



Image Source: www.gettyimages.com

This chapter provides a review of current school district, municipal, and state laws and policies pertaining to pedestrians and bicyclists. Excerpts of laws have been incorporated into the review. Laws cited can be found in full in Appendix F. All recommendations in the report are informed by these legal considerations.

Establishment of the Safe Routes to School Program

The Safe Routes to School Program (SRTS) is a federal program. Although some grants are awarded at the federal level, many grants are administered through individual state SRTS programs.

Federal Establishment of the Safe Routes to School Program

In 2005, Congress passed the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users,” given the short name “SAFETEA-LU.” SAFETEA-LU authorized funds for “Federal-aid highways, highway safety programs, and transit programs, and for other purposes” [1], including the SRTS in section 1404 of SAFETEA-LU. Three years later in 2008, Congress passed PL 110-244, amending SAFETEA-LU to “make technical corrections, and for other purposes” [2]. The language establishing SRTS in section 1404 of SAFETEA-LU, as amended by PL 110-244, appears in the notes of Section 402, Highway safety programs, of Title 23, Highways, United States Code*.

SRTS is, first and foremost, a transportation program; a transportation act introduced the program. When codified, the program found its home in Title 23, Highways. The law directs the Secretary of Transportation to “establish and carry out a safe routes to school program for the benefit of children in primary and middle schools” [3] and once the Secretary of Transportation apportions funding to the states, each state’s Department of Transportation administers their respective apportionment.

Federal Purpose and Eligible Projects and Activities of the Safe Routes to School Program

SRTS aims “to enable and encourage children, including those with disabilities, to walk and bicycle to school” [3]. In addition, SRTS aims “to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age” [3]. SRTS serves “schools providing education from kindergarten through eighth grade” and not high schools, reflecting this purpose’s emphasis on “an early age” [3]. Making active commuting “safer and more appealing” calls attention to the role of encouragement explicitly mentioned in the first goal. Although this is a transportation program, the wording of these purposes conveys the potential for overlap between SRTS, public health, and education.

* For the remainder of this chapter, any reference to the Federal establishment of SRTS draws language from the codified language found in 23 U.S. Code Annotated 402, not the original Public Laws.



The third and final purpose listed reveals a different motivation for SRTS. SRTS aims “to 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” [3]. This points to a goal of reducing vehicles on the road, particularly around schools, in addition to increasing children walking and bicycling. Decreasing traffic may improve surrounding environmental quality. High traffic concerns parents; decreasing traffic may also address this concern.

SRTS can be used for two different types of projects and activities as authorized by Congress. The first listed type of eligible projects and activities focus on physically improving the infrastructure that enables walking and bicycling to school.

Amounts apportioned to a State under this section [this note] may be used for the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bicycle parking facilities, and traffic diversion improvements in the vicinity of schools. [3]

The act restricts infrastructure improvement to “the vicinity of schools” or “the area within bicycling and walking distance of the school (approximately 2 miles)” [3]. Proper infrastructure around a school gives children in proximity to the school the physical means to walk and bicycle there.

The second type of eligible projects and activities offers motivation and support for the use of the infrastructure provided.

In addition to projects described in paragraph (1) [Infrastructure-related projects], amounts apportioned to a State under this section [this note] may be used for noninfrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training, volunteers, and managers of safe routes to school programs. [3]

These encouragement activities are not optional. “Not less than 10 percent and not more than 30 percent of the amount apportioned to a State under this section [this note] for a fiscal year shall be used for noninfrastructure related activities under this subparagraph” [3]. Infrastructure projects combined with noninfrastructure activities fulfill the SRTS purpose both “to enable and encourage” [3].

New York State Establishment of the Safe Routes to School Program

In accordance with federal law, Section 14 subdivision 35 of New York State (NYS) Transportation Law lists the duty “to establish and administer a safe routes to school program” [4] as one of the general functions, powers, and duties of the Department of Transportation. The purpose of the SRTS as written into NYS Law is “to eliminate or reduce physical impediments to primary and secondary school-aged children walking or bicycling to school” [4]. There are three striking differences between the federally stated purposes of SRTS and the NYS purpose of SRTS. First, the language changes from “enable and encourage” walking and bicycling [3] to “eliminate or reduce” impediments to walking and bicycling [4], a change which conveys different approaches to increasing rates of children actively commuting to school. Secondly, NYS singles out physical impediments without mentioning or addressing the possibility of other barriers while the federal law leaves the nature of barriers open to interpretation. Thirdly, Section 14 does not contain language found in the second and third federal purposes, the language of “healthy and active lifestyle” or “reduce traffic, fuel consumption, and air pollution” [3].

The differences noted above are not simply semantic. The characteristics given consideration when reviewing applications and limitations to project costs reflect the word choice of the NYS purpose. All projects applying for NYS SRTS funding must fulfill four requirements:

- (i) the project has a service life of ten or more years;
- (ii) the project is located within two miles of a primary school or within three miles of a secondary school;
- (iii) the amount of funds requested is no greater than prior unreimbursed municipal project expenditures for work completed or materials incorporated in qualifying projects; and
- (iv) the amount of municipal funds appropriated for transportation capital projects by municipalities shall not be reduced because of the availability of these funds. [4]

The purpose of the SRTS as written into NYS Law is “to eliminate or reduce physical impediments to primary and secondary school-aged children walking or bicycling to school”.

In addition to fulfillment of these requirements, “consideration also shall be given to the demonstrated need of an applicant, the potential of the project to reduce child injuries and fatalities, and the potential of the project to reduce or eliminate hazardous conditions for pedestrians and/or bicyclists” [4]. These selection criteria stress reduction and elimination of impediments, echoing the purpose. If funded, a NYS SRTS project must limit its project costs to “the construction, reconstruction, enhancement, improvement, replacement, reconditioning, restoration, rehabilitation and preservation of crosswalks, sidewalks, bicycle lanes, and traffic calming measures” [4]. Absent from this list are the noninfrastructure-related activities listed as eligible in federal law. From the federally established scope of SRTS, NYS has chosen to emphasize physical improvements and the reduction of already hazardous conditions.



New York State Education Law

New York State (NYS) Education Law requires two courses of instruction for students of particular relevance to the Safe Routes to School Program (SRTS): courses of instruction in highway safety and traffic regulation in Section 806 and courses of study in prevention of child abduction in Section 803-a. Although not required, school safety patrols, allowed by NYS Education Law, are also relevant.

Courses of Instruction in Highway Safety and Traffic Regulations

The highway safety and traffic regulation instruction, including bicycle safety, required by NYS could further the desire of NYS SRTS “to reduce child injuries and fatalities” [4].

The regents of The University of the State of New York shall prescribe courses of instruction in highway safety and traffic regulation which shall include bicycle safety, to be maintained and followed in all the schools of the state. The boards of education and trustees of the several cities and school districts of the state shall require instruction to be given in such courses, by the teachers employed in the schools therein. All pupils attending such schools shall attend upon such instruction [5].

The regents of The University of the State of New York shall prescribe courses of instruction in highway safety and traffic regulation which shall include bicycle safety

Section 806 charges the regents to determine the character and structure of the instruction but assigns enforcement to the commissioner, giving the commissioner power to withhold funding to ensure provision of highway safety and traffic regulation instruction.

The regents shall determine the subjects to be included in such courses of instruction in highway safety and traffic regulation including bicycle safety, and the period of instruction in each of the grades in such subjects. They shall adopt rules providing for attendance upon such instruction and for such other matters as are required for carrying into effect the teaching of the courses of instruction prescribed by this section. The commissioner of education shall be responsible for the enforcement of such section and shall cause to be inspected and supervise the instruction to be given in such subjects. The commissioner may, in his discretion, cause all or a portion of the public school money to be apportioned to a district or city to be withheld for failure of the school authorities of such district or city to provide instruction in such courses and to compel attendance upon such instruction, as herein prescribed, and for a noncompliance with the rules of the regents adopted as herein provided [5].

Courses of Study in Prevention of Child Abduction

The NYS prescribed courses of study in prevention of child abduction could contribute to NYS SRTS efforts “to reduce or eliminate hazardous conditions for pedestrians and/or bicyclists” [4].

All pupils in grades K-8 in all public schools in the state shall receive instruction designed to prevent the abduction of children. Such instruction shall be provided by or under the direct supervision of regular classroom teachers, provided, however, that such instruction may be provided by any other agency, public or private. [5]

The board of education or trustees for every school district may choose to develop these courses of study or to utilize courses of instruction developed by another agency. Additionally, the board of education or trustees of every school district “shall provide appropriate training and curriculum materials for the regular teachers who provide such instruction” [5].

For purposes of developing such courses of study, the board of education or trustees of every school district may establish local advisory councils or utilize the school-based shared decision making and planning committee established pursuant to regulations of the commissioner to make recommendations concerning the content and implementation of such courses. School districts may alternatively utilize courses of instruction developed by consortia of school district, boards of cooperative educational services, other school districts or any other agency, public or private. Such advisory councils shall consist of, but not be limited to, parents, school trustees and board members, appropriate school personnel, business and community representatives, and law enforcement personnel having experience in the prevention of child abduction [5].

In this case, the law does not charge the commissioner with enforcement of provision of the courses of study, but Section 803-a does mandate that the commissioner

provide technical assistance to assist in the development of curricula for such courses of study which shall be age appropriate and developed according to the needs and abilities of pupils at successive grade levels in order to provide awareness skills, information, self-confidence and support to aid in the prevention of child abduction [5].

School Safety Patrols

NYS does not require school safety patrols but does allow a school district to organize them. School safety patrols encourage safe use of highways and bicycles. However, school safety patrols do not have the authority or permission to direct vehicular traffic.

Any board of education or school district board is empowered to organize in the school over which it has control a school safety patrol and, with the written consent of the parents, to appoint pupils as members thereof for the purpose of influencing and encouraging the safe use of highways and highway crossings and bicycles by the pupils of the school. Nothing herein contained shall be construed to authorize or permit the use of any safety patrol member for the purpose of directing vehicular traffic nor shall any safety patrol member be stationed in that portion of the highway intended for the use of vehicular traffic.

5 - Legal Framework



Such patrol shall function only under the direction and control of the principal or teacher in charge of such school. No liability shall attach either to the school district or any individual, trustee, board member, superintendent, principal, teacher or other school authority by virtue of the organization, maintenance or operation of a school safety patrol organized, maintained and operated under authority of this section. [5]

New York State General Municipal Law

School Crossing Guards

Interestingly, the law regulating school crossing guards can be found in New York State (NYS) General Municipal Law as opposed to NYS Education Law even though school crossing guards serve educational institutions. In the past, the State Comptroller has issued opinions stating that a school district may not hire or compensate school crossing guards directly or through contribution towards the municipality's employment of school crossing guards [6] nor may they use school personnel as school crossing guards [7]. The duty of appointing and compensating school crossing guards falls to a municipality's police department or police district.

The duly constituted authorities of any city, town, or village or any county police department or police district may designate, authorize and appoint such a number of persons as such authority shall deem necessary, and at such salaries as such authority shall deem advisable, as school crossing guards to aid in protecting school children going to and from school, and church crossing guards to aid in protecting persons going to and from places of worship, and for such purpose shall have power to control vehicular traffic within such municipality. [8]

New York State Vehicle and Traffic Law

As children walk and bicycle to school, they are subject to New York State Vehicle and Traffic (NYS V&T) Law. Of particular interest are Article 27, Pedestrians' Rights and Duties, and Article 34, Operation of Bicycles and Play Devices. Detailed treatment of each article follows presentations of selected NYS V&T Law definitions and applicability of Articles 27 and 34, including a discussion of bicycling on the sidewalk.

Selected NYS V&T Law Definitions

Although the common use definition of some words, such as pedestrian, are similar to their NYS V&T Law definition, there is a substantial difference between the common use definition and NYS V&T Law definition of other words, such as highway. The subsequent selected definitions are meant to clarify the meanings of the terms as NYS V&T Law uses them.

To begin, NYS V&T Law defines traffic as "pedestrians, ridden or herded animals, vehicles, bicycles, and other conveyances either singly or together while using any highway for purposes of travel" [9]. By this definition, pedestrians, vehicles, and bicycles are all types of traffic. Therefore, all traffic, pedestrians and

Figure 5.3: A Child Crossing with a Crossing Guard



Image Source: www.gettyimages.com

bicyclists included, must obey traffic-control signals. NYS V&T Law defines traffic-control signal as “any device, whether manually, electrically, or mechanically operated, by which traffic is alternately directed to stop and permitted to proceed” [9].

NYS V&T Law defines a pedestrian as “any person afoot or in a wheelchair” [10]. NYS V&T Law defines a bicycle as “every two or three wheeled device upon which a person or persons may ride, propelled by human power through a belt, a chain or gears, with such wheels in a tandem or tricycle, except that it shall not include such device having solid tires and intended for use only on a sidewalk by pre-teenage children” [11]. NYS V&T Law does not define play devices but does define in-line skate, roller skate, and skate board. NYS V&T Law defines all three as “a manufactured or assembled device” powered “by means of human foot and leg power” ([12], [9]). The definitions differ in their specific physical descriptions: shape, placement of wheels, etc. NYS V&T Law defines vehicles as “every device in, upon, or by which any person or property is or may be transported or drawn upon a highway, except devices moved by human power or used exclusively upon stationary rails or tracks” [9]. According to this NYS V&T definition, bicycles are not vehicles.

Both the definitions for traffic and vehicles refer to the highway. Highways and streets are similar in their definitions. NYS V&T Law defines highway and street with the same exact definition: “the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel” ([9], [9]). The roadway, shoulder, and slope are all components of a highway or a street. NYS V&T Law defines roadway as “that portion of a highway improved, designed, marked, or ordinarily used for vehicular travel, exclusive of the shoulder and slope” [13], shoulder as “that improved portion of a highway contiguous with the roadway” [9], and slope as “that portion of a highway exclusive of the roadway and shoulder” [14].

Pertinent to pedestrians and bicyclists are the definitions for crosswalk, sidewalk, bicycle lane, and bicycle path. NYS V&T Law defines crosswalk as

(a) That portion of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway between the curbs or, in the absence of curbs, between the edges of the traversable roadway.

(b) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface. [9]

NYS V&T Law defines intersection as “the area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two highways which join one another at, or approximately at, right angles, or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict” [9]. NYS V&T Law defines sidewalk as “that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians” [9]. And the sidewalk is part of the highway: “New York’s traffic



laws makes [sic] clear that, in fact, a highway-in a technical sense-includes the sidewalk” [15]. NYS V&T Law defines bicycle lane as “a portion of the roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicycles” [9] and bicycle path as “a path physically separated from motorized vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way and which is intended for the use of bicycles” [16].

Applicability of Article 27 and Article 34 of NYS V&T Law

Article 27, Pedestrians’ Rights and Duties, begins by establishing that wherever there is a traffic-control signal, commonly known as a traffic light, pedestrians must obey the signal as described in Section 1111, but “at all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this article” [9].

Section 1111 specifies the meanings of the green, yellow, and red indications of traffic-control signals. Section 1111 also stipulates “whenever traffic is controlled by traffic-control signals [...] said light shall indicate and apply to drivers of vehicles and to pedestrians” [9]. Section 1112, Pedestrian-control signal indications, designates the meanings of such signals as applied to pedestrians.

The regulations of Article 34, Operation of Bicycles and Play Devices, “applicable to bicycles or to in-line skates shall apply whenever a bicycle is, or in-line skates are, operated upon any highway, upon private roads open to public motor vehicle traffic and upon any path set aside for the exclusive use of bicycles, or in-line skates, or both” [9].

In addition to these regulations, traffic laws, as applicable to the driver of a vehicle, also apply to bicycle and play device operators on the roadway. The extension of the rights and duties of a driver of a vehicle to an operator of a bicycle or play device is specifically limited to operators of bicycles and play devices on the roadway and would not apply to operators of bicycles and play devices on non-roadway portions of the highway.

Every person riding a bicycle or skating or gliding on in-line skates upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this title [Title VII. Rules of the Road], except as to the special regulations in this article and except as to those provisions of this title which by their nature can have no application. [9]

Bicycles on Sidewalks

Operators of bicycles and in-line skates share the same rights, as well as duties, of other drivers on the roadway, as established by Section 1231 of NYS V&T Law. Implicit in this granting of rights is permission to operate on the roadway. On the other hand, Section 1230 (b) recognizes jurisdiction over operation of bicycles or in-line skates “upon any highway, upon private roads open to public motor vehicle traffic and upon any path set aside for the exclusive use of bicycles, or

Figure 5.4: Pedestrian Control Signal



Image Source: www.gettyimages.com

in-line skates, or both” [9]. This list implies that bicycles and in-line skates will be found on non-roadway portions of the highway, private roads, and other paths in addition to the roadway. Yet, direct permission, limited permission, or prohibition for bicycles or play devices to operate on non-roadway portions of the highway, private roads, or other paths cannot be found in Article 34, Operation of Bicycles and Play Devices, which is notably silent on the matter of bicycles and play devices on sidewalks.

However, in an appeal brought before the United States Court of Appeals for the Second Circuit, José A. Cabranes, Circuit Judge, held that the defendant did not violate Section 1234 (a) in Article 34 of NYS V&T Law by riding his bicycle on the sidewalk [15]. Police officers called over Samuel McFadden for riding his bicycle on the sidewalk. Once stopped and before the police officers, McFadden confessed to the possession of a firearm, leading to his arrest and conviction. In this case, McFadden appeals his conviction of possession of a firearm by a previously convicted felon and his sentence, arguing “that the firearm found on him when he was seized was the fruit of an illegal search because the police did not have a reasonable suspicion to believe he was committing a crime and were therefore not authorized to seize him” [15].

The arresting officers had stopped McFadden on the basis of New York City Administrative Code Section 19-176(b), which prohibits bicycling on the sidewalk unless permitted by an official sign. In the course of the case, the District Court trying the case decided that an arrest based on Section 19-176(b) of the Administrative Code would have been illegal, but the District Court also decided that McFadden had violated Section 1234(a) of NYS V&T Law and deemed an arrest based on such violation to be legal. Section 1234 (a) states

Upon all roadways, any bicycle or in-line skate shall be driven either on a usable bicycle or in-line skate lane or, if a usable bicycle or in-line skate lane has not been provided, near the right-hand curb or edge of the roadway or upon a usable right-hand shoulder in such a manner as to prevent undue interference with the flow of traffic except when preparing for a left turn or when reasonably necessary to avoid conditions that would make it unsafe to continue along near the right-hand curb or edge. [9]

This statute requires the operator to follow the directives of the section *if* a person operates a bicycle or play device upon a roadway or the right-hand shoulder. However, Section 1234 (a) does not state that bicycles and play device operators *shall* ride upon on a roadway or any other equivalent phrase that would require such operators to drive on a roadway. For this reason, the United States Court of Appeals for the Second Circuit declared that McFadden had not violated Section 1234(a) of the NYS V&T Law, contrary to the District Court’s conclusion. The United States Court of Appeals for the Second Circuit upheld the arrest to be proper and lawful on the basis of violating Section 19-176(b) of the New York City Administrative Code.

5 - Legal Framework



In this case, McFadden was illegally operating a bicycle on a sidewalk. His actions did not violate any state law but rather the law of a local municipality. Section 180 of NYS General Municipal Law gives municipalities the power to regulate the use of bicycles:

The governing boards of municipal corporations as defined in section two of this chapter, may adopt local laws to regulate the use of bicycles on the public highways, streets, avenues, walks, parks and public places within their limits. Such local laws shall be supplemental and in addition to the provisions of the vehicle and traffic law relating to vehicles and not in conflict therewith. Provided further that such local laws shall not impose any charge, tax or otherwise not provide for the free use of bicycles and tricycles. [17]

Operating a bicycle on the sidewalks of Amherst, NY would only be illegal if the Town of Amherst passed an ordinance prohibiting operation of bicycles on sidewalks in the town.

NYS Town Law Section 130 subdivision 4 and 7 further solidify the power of all NYS towns to regulate their sidewalks. Section 130 states that “the town board after a public hearing may enact, amend and repeal ordinances, rules and regulations not inconsistent with law, for the following purposes in addition to such other purposes as may be contemplated by the provisions of this chapter or other laws” [18]. Subdivision 4 lists “Sidewalks” as one of these purposes. Subdivision 7 lists “Use of streets, highways, sidewalks and public places” as another of these purposes.

Sidewalks. Regulating the manner of construction, reconstruction and repair of sidewalks, the materials to be used, the grades and the widths thereof and prohibiting any construction, reconstruction or repair which does not comply with such regulations; requiring the owner and occupant of premises abutting on any street where a sidewalk has been laid, to keep the sidewalk in front of such premises, free and clear from snow, ice, dirt and other obstructions and upon default thereof provide for the removal thereof at the expense of the owners of such premises and that such charge shall become a lien upon the premises benefited thereby, until paid. [18]

Use of streets, highways, sidewalks and public places. (a) Regulating the use of streets, highways, sidewalks and public places by pedestrians, animals, motor and other vehicles, including local and interurban street cars; restricting parking of all vehicles therein; regulating parades and public assemblages therein; regulating or prohibiting coasting therein; and, subject to the approval of the department of transportation, requiring railroad companies to employ and maintain competent flagmen and erect gates at any street or highway crossing; prohibiting the deposit of any dirt, filth, waste or rubbish in any street, highway, sidewalk, that part of any waterway within its jurisdiction or public place or incumbering thereof by any encroachment of buildings, structures, excavation or otherwise; regulating the manner in which excavation may be made in or under the streets, highways, sidewalks or public places and requiring an indemnity

bond as a condition precedent thereto or the town board may require as the condition precedent thereto, the deposit in cash of such an amount as the board may determine necessary to cover the probable expense to the town of the replacement by the town of the street, highway, sidewalk or public place, and the unexpended balance, if any, shall be refunded to the depositor; providing for the removal of snow and ice therefrom; prohibiting the use by owners and occupants of property abutting on public streets or grounds of barbed wire or similar fences along the boundaries of such street or grounds. [10]

Article 27: Pedestrian Right of Way

When there are no traffic-control signals or they are not in order, pedestrians are awarded right of way in crosswalks. NYS V&T Law recognizes “that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway between the curbs or, in absence of curbs, between the edges of the traversable roadway” or “any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface” [9] as a crosswalk. Pedestrians also have the right of way on sidewalks: “the driver of a vehicle emerging from or entering an alleyway, building, private road or driveway shall yield the right of way to any pedestrian approaching on any sidewalk extending across such alleyway, building entrance, road or driveway” [9]. This right of way is also reflected in the NYS V&T Law definition of sidewalk: “that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians” [9].

Figure 5.4: A Child Plays on a Sidewalk



Image Source: www.gettyimages.com

Article 27: Duties of Pedestrians

Pedestrians have duties that accompany these rights. Pedestrians, even when in the lawful right of way, should exercise due care and take note of their surroundings and any visible dangers. “One cannot, to the exclusion of everyone and everything around him, rely solely upon his right of way” [19]. Additionally, “no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that is impractical for the driver to yield” [9]. Furthermore, pedestrians shall yield right of way to vehicles when crossing other than in a marked or unmarked crosswalk or crossing a roadway when a pedestrian bridge or tunnel are provided. It shall be unlawful for a pedestrian to cross a roadway diagonally unless authorized by official traffic-control devices [9].

If pedestrians walk in a roadway, pedestrians “shall when practicable walk only on the left side of the roadway or its shoulder facing traffic which may approach from the opposite direction. Upon approach of any vehicle from the opposite direction, such pedestrian shall move as far to the left as is practicable” [20]. However, it shall be unlawful for pedestrians to walk on or along a roadway if a sidewalk, which may be used safely, is present [20].



Article 34: Duties of Bicycle and Play Device Operators

The requirement to drive on the right edge if on a roadway, unless conditions make doing so unsafe, is just one of numerous duties of bicycles and play device operators. NYS V&T Law directs a person to ride a bicycle as it is designed: upon or astride the seat with feet on the pedals and not with more than the number of riders for which the bicycle is equipped [21]. NYS V&T Law further requires bicyclists to give hand and arm signals to indicate turning left, turning right, and stopping or decreasing speed with signals designated and described in Section 1237 [9]. NYS V&T Law orders bicycle and play device operators upon a roadway to ride single file when passing or being overtaken by a vehicle and not more than two abreast otherwise, unless on a bicycle or in-line skate lane or path with sufficient space for more [9]. NYS V&T Law also orders bicycle and play device operators to complete stop before entering a roadway if entering from a private road, driveway, alley, or over a curb [9]. By law, bicycle and play device operators may not carry articles that obstruct their vision in any direction nor obstruct their ability to put one hand on the handlebars if on a bicycle [9]. NYS V&T Law prohibits clinging to vehicles, directly or while riding a bicycle or play device, upon a roadway. The law allows for exceptions such as emergency operations, agricultural purposes, and riding in the cargo area of a truck with permission of the operator [14]. By law, bicycle and play device operators eighteen years or older may not leave an incident in which they have caused physical injury to another person without providing their name and residence to the injured party, if practical, and reporting the incident to a police or judicial officer on site or as soon as possible. Leaving the incident without reporting it is a violation or a class B misdemeanor depending on the severity of the physical injury sustained by another person. NYS V&T Law also holds bicycle and play device operators responsible for having proper safety equipment, including a bell, a brake, reflective tires or a reflex reflector mounted on the spokes, and if riding between on-half hour after sunset to one-half hour before sunrise, a lamp on a bicycle [9]. If operating in-line skates or a skateboard between on-half hour after sunset to one-half hour before sunrise, operators are responsible for wearing visibly reflective clothing [9].

Article 34: Children as Operators or Passengers of Bicycles or Play Devices

The article refers to children in its opening line in the first subdivision of the first section: “the parent of any child and the guardian of any ward shall not authorize or knowingly permit any such child or ward to violate any of the provisions of this article” [9]. Regulations that are age specific can also be found in Section 1238 of NYS V&T Law, which mandates that no person five or more years of age and less than fourteen years of age shall “operate a bicycle” [9], “skate or glide on in-line skates or a skate board” [9], or “ride upon, propel or otherwise operate a two-wheeled vehicle commonly called a scooter ” [9] unless such person is wearing a helmet meeting the standards established by the commissioner. In addition, “no person operating a bicycle shall allow a person five or more years of age and less than fourteen years of age to ride as a passenger on a bicycle unless such passenger is wearing a helmet meeting

Figure 5.6: Children Riding the the Right-of-Way



Image Source: www.flickr.com

standards established by the commissioner” [9]. Subdivision five elaborates on the necessary standards: “for the purposes of this subdivision wearing a helmet means having a helmet of good fit fastened securely upon the head with the helmet straps” [9]. Subdivisions five-a and five-b include similar, although not identical, meanings of wearing a helmet.

Despite being required by law to wear a helmet, “the failure of any person to comply with the provisions of this section shall not constitute contributory negligence or assumption of risk, and shall not in any way bar, preclude or foreclose an action for personal injury or wrongful death by or on behalf of such person, nor in any way diminish or reduce the damages recoverable in any such action” [9].

Subdivision six of NYS V&T Law Section 1238 addresses violations of subdivisions five, five-a, and five-b of the same section. “Any person who violates the provisions of subdivision five, five-a or five-b of this section shall pay a civil fine not to exceed fifty dollars” [9]. “The court shall waive any fine for which a person who violates the provisions of subdivision five of this section would be liable if such person supplies the court with proof that between the date of violation and the appearance date for such violation such person purchased or rented a helmet” [9]. Also, “the court may waive any fine for which a person who violates the provisions of subdivision five, five-a, or five-b of this section would be liable if the court finds that due to reasons of economic hardship such person was unable to purchase a helmet or due to such economic hardship such person was unable to obtain a helmet from the statewide [...] or a local distribution program” [9]. Subdivision eight of NYS V&T Law Section 1238 addresses appropriateness of summons: “A police officer shall only issue a summons for a violation of subdivision two, five, or five-a of this section by a person less than fourteen years of age to the parent or guardian of such person if the violation by such person occurs in the presence of such person’s parent or guardian and where such parent or guardian is eighteen years of age or more. Such summons shall only be issued to such parent or guardian, and shall not be issued to the person less than fourteen years of age” [9].



Amherst Town Code

The Amherst Town Code explicitly notes the rights and safety of pedestrians in three chapters. Although not explicitly for the safety of pedestrians, Town Code regulating sidewalk maintenance contributes to their safety. There are no corresponding references to the rights and safety of bicyclists. Of particular note, the Town Code does not prohibit bicycles on sidewalks within the Town.

Pedestrian Protections

The Town of Amherst affords pedestrians with certain protections. Section 186-20 of the Amherst Town Code, Crosswalks, states “no person shall operate a motor vehicle so as to fail to yield the right-of-way to pedestrians at properly marked or posted crosswalks” [22]. This code holds for crosswalks on file in the offices of the Superintendent of Highways and the Town Clerk. The Town Code cites New York State Vehicle and Traffic Law Section 1151, Pedestrians’ right of way in crosswalks, as the source of authority for Amherst’s code on crosswalks.

Protections for pedestrians also can be found in Amherst Town Code’s chapters regulating Curb Cuts and Noise. “No curb may be lowered or driveway constructed which may be in any way dangerous or hazardous to pedestrians or vehicular traffic” reads Amherst Town Code Section 95-4I [22]. Section 138-5D of the Amherst Town Code chapter regulating noise prohibits “the use or operation of any sound-reproduction device in a vehicle which would constitute a threat to the safety of pedestrians or vehicle operators”[22] .

Sidewalk Maintenance

Codes regulating the maintenance of sidewalks aid pedestrians by mandating sidewalks to be cleared of hazards. Specifically, Section 151-60C of the Amherst Town Code states “all sidewalks, walkways, stairs, driveways, parking spaces and similar areas shall be kept in a proper state of repair and maintained free from hazardous conditions” [22]. With few exceptions, the Town Code names owners and occupants responsible for this maintenance:

The owner or occupant of any premises fronting or abutting on any street or highway shall repair, keep safe and maintain any sidewalk abutting the premises and keep it free and clear from snow, ice, dirt or other obstruction. All trees, shrubs, plants or other vegetation must be cut back to a height of eight feet directly above the surface of any sidewalk. Any such owner or occupant shall be liable for any injury or damage by reason of omission or failure to repair keep safe and maintain such sidewalk or to remove snow, ice or other obstructions therefrom or negligence in performing those functions. [22]

However, maintenance of sidewalks is uneven as the only enforcement for these maintenance codes is complaint based [22] and the Town of Amherst explicitly limits its liability in Section 139-1 to responding to written notifications of hazards.

Figure 5.7: A Man Clearing Snow From His Walkway



Image Source: www.gettyimages.com

No civil action shall be maintained against the Town of Amherst or the Superintendent of Highways of the town or against any improvement district in the town for damages or injuries to person or property sustained by reason of any street, highway, bridge, culvert, sidewalk or crosswalk being defective, out of repair, unsafe, dangerous or obstructed unless written notice of such defective, unsafe, dangerous or obstructed condition of such street, highway, bridge, culvert, sidewalk or crosswalk was actually given to the Town Clerk or the Superintendent of Highways and there was thereafter a failure or neglect within a reasonable time to repair or remove the defect, danger or obstruction complained of. No such action shall be maintained for damages or injuries to person or property sustained solely in consequence of the existence of snow or ice upon any street, highway, bridge, culvert, sidewalk or crosswalk unless written notice thereof, specifying the particular place, was actually given to the Town Clerk or the Superintendent of Highways and there was a failure or neglect to cause such snow or ice to be removed or to make the place otherwise reasonably safe within a reasonable time after the receipt of such notice. [22]

Williamsville Central School District Policy

The Williamsville Central School District (WCSD) Policy recognizes that physical activity contributes to students' health, well-being and ability to learn and that physical education classes alone cannot fulfill students' need for physical activity. Therefore, promoting walking and bicycling to school as a regular source of physical activity is consistent with WCSD Policy.

The District's Nutrition and Fitness Policy begins with a commitment "to providing school environments that promote and protect student's health, well-being and ability to learn by supporting healthy eating and physical activity"

Health and Well-Being

The WCSD is dedicated to the physical well-being and safety of its students. The District's Nutrition and Fitness Policy, #5661, begins with a commitment "to providing school environments that promote and protect student's health, well-being and ability to learn by supporting healthy eating and physical activity" [23]. In an overview, policy #5661 goes on to state "all students in grades K-12 will have opportunities, support and encouragement to be physically active on a regular basis" [23].

Safety Policy

The District Policy Manual addresses safety as well as physical health. "The practice of safety will be considered an integral part of the instructional program through fire prevention, emergency procedures and drills, driver education, and traffic and pedestrian safety" [23], writes the WCSD in policy #8210, the District's Safety Conditions and Programs Policy. The following policy, #8211, deals with prevention instruction. Prevention refers to a range of subjects from substance abuse prevention to accident prevention in the classroom. Relevant to Safe Routes to School, policy #8211 contains a subdivision titled "Instruction on Prevention of Child Abduction," which requires all students in grades K-8 to receive age appropriate instruction formulated to prevent the abduction of children. This sampling of the WCSD policy exemplifies the WCSD's commitment to the physical health and security of its students.



Physically Active Lifestyle

Although the District's responsibility and authority are limited to school property, the District's concern for its students extends beyond the classroom. The District is not responsible for students until they step onto the school bus or after they leave the school bus [23]. Still, it is the hope of the District that its instruction will "foster lifelong habits of healthy eating and physical activity" in their students [23]. The WCSD recognizes that physical education class alone cannot fulfill students' needs for physical activity. Towards the development of healthy lifelong habits, "classroom health education will complement physical education by reinforcing the knowledge and skill needed to maintain a physically active lifestyle and to reduce time spent on sedentary activities" [23]. Encouraging children to walk and bicycle to school is one way to achieve this goal.

Towards the development of healthy lifelong habits, "classroom health education will complement physical education by reinforcing the knowledge and skill needed to maintain a physically active lifestyle and to reduce time spent on sedentary activities"

Traffic Safety

One challenge of encouraging active commuting among students is that it requires them to navigate traffic. The WCSD recognizes that "there is no substitute for training to develop safe habits in pedestrian and vehicular traffic" [23]. All students must learn to navigate pedestrian and vehicular traffic. This is true whether a child is walking to school, waiting at a bus stop, or being dropped off by a private vehicle. Instructing students in traffic safety, and therefore expanding their mobility choices, is one practical step towards preparing WCSD students "to thrive in a challenging and rapidly changing global community" [23].

Limitations of Legal Framework Reviewed

Walking and bicycling to school does not occur in a vacuum. Laws and policies regulating the busing practices of school districts, the speed limits in school zones, and the extent of liability for injuries sustained while commuting are examples of guiding directives that influence the environment of active commuting. However, these laws and policies are beyond the scope of this review. In addition, any regulations at the regional, county, and village level are beyond the scope of this review.

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Current Commuting Conditions in the Williamsville Central School District

Schools and Student Enrollment

The Williamsville Central School District (WCSD) consists of 13 schools: six elementary schools, four middle schools, and three high schools. During the 2008 – 2009 school year, the elementary and middle schools served 7,017 students in kindergarten through 8th grade—the target population for this plan. Elementary schools include kindergarten through 4th grades and middle schools include 5th through 8th grades.

In 2008 – 2009 school year*, WCSD elementary schools served 3,772 students, which averaged to 629 students per school. Maple East Elementary has the highest enrollment with 668 students, and Forest Elementary has the lowest with 596 students.

The WCSD middle schools served 3,245 students, which averaged to 811 students per school. Transit Middle had the highest enrollment with 961 students, while Heim Middle had the lowest enrollment at 629 students (see Table 6.1 and Figure 6.1).

Table 6.1: Elementary and Middle School Enrollment

Elementary Schools	Enrollment
Maple East	668
Maple West	642
Forest	596
Heim	639
Dodge	613
Country Parkway	614
Total	3,772
Average	629

Middle Schools	Enrollment
Mill	906
Transit	961
Heim	629
Casey	749
Total	3,245
Average	811

Total Elementary And Middle Enrollment	7,017
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Data Source: Safe Routes to School Survey, Spring 2009

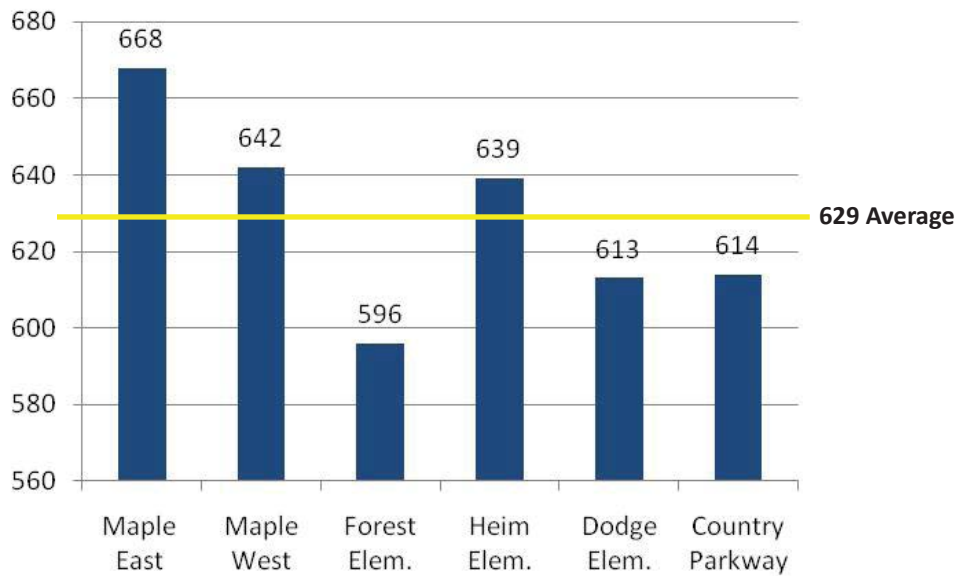
* SRTS Survey of Williamsville Central School District (K – 8), Spring 2009

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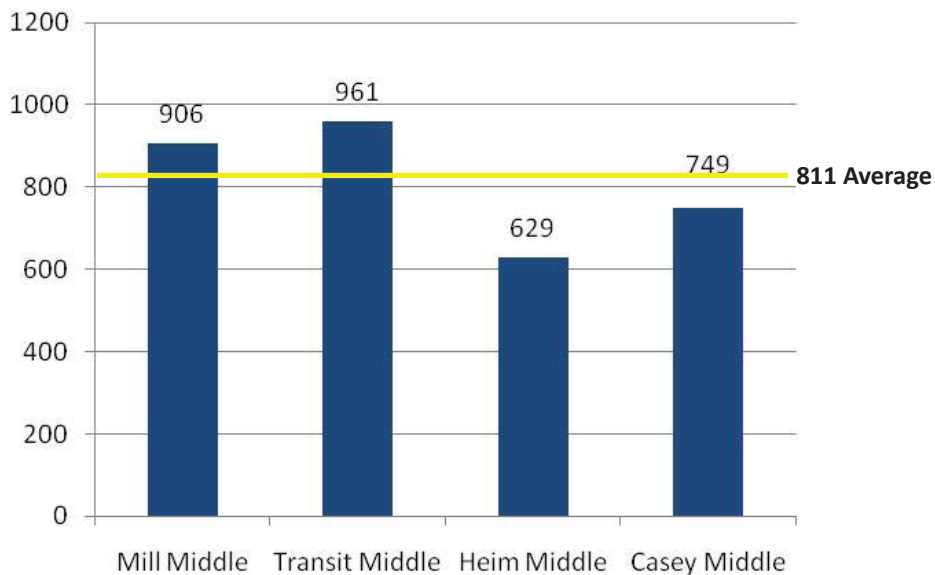
Figure 6.1: K-8 Enrollment

Elementary Schools



Data Source: Safe Routes to School Survey, Spring 2009

Middle Schools



Data Source: Safe Routes to School Survey, Spring 2009

Children's Commute to School

Motorized vehicle is the primary transportation choice for students in the WCSD[†]. Results from the 2009 SRTS survey of students suggest that a majority travel to and from school by bus, 72.7% and 56.7% in the elementary and middle schools, respectively. (See Figure 6.2 and Table 6.2) Of the remaining students, 23.4% (elementary) and 25.2% (middle schools) report being driven to school by their parents.

Among elementary school students, only 2.5% walk or bike to school. Heim Elementary has the most students who walk to/from school (3.8%) and Maple East ranks at the bottom (0%). Maple East has the highest percentage of students who take the school bus within the elementary schools (80.8%), and Maple West has the lowest (68.4%).

A much higher percentage of middle school students, 15%, walk or bike to school. Heim Middle, located adjacent to Heim Elementary, also has the highest percentage (19.9%) of students who walk or bike to school.

Transit Middle has the highest percentage of students who take the school bus (64.6%), while Heim Middle, which has the highest number of students walking and biking to school, has the lowest number of students taking the school bus.

A majority of parents report that their children take the bus to school (76%).[‡] Indeed, the school district provides bussing for all students living within the district boundaries[3]. Yet bussing children to school offers some challenges as well. According to the EPA, the fumes produced by idling school buses are harmful to children's health if continuous exposure occurs. Incidentally, an idling school bus engine burns approximately half a gallon of fuel per hour [4]. If the WCSD were to require its buses to limit or eliminate idling, as proposed in the recommendations of this plan, the district and the school children would see economic and health gains.§ For example, if the WCSD would to implement a policy where buses were to reduce idling time by 10 minutes, then the district would experience savings of \$60 and 15 gallons of diesel fuel per bus per year.

[†] In this chapter, "students" refers to students in kindergarten through the 8th grade.

[‡] This is based on parents' response to the SRTS survey, Spring 2009.

[§] In 2008, the WCSD spent \$86,173 on transportation. In that same year, the WCSD spent \$0 on safety and public health initiatives 5. Comptroller, N.Y.S. Local Government and School Accountability. 2009; Available from: http://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm.

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Figure 6.2: K-8 Students' - Mode of Transportation to and from School

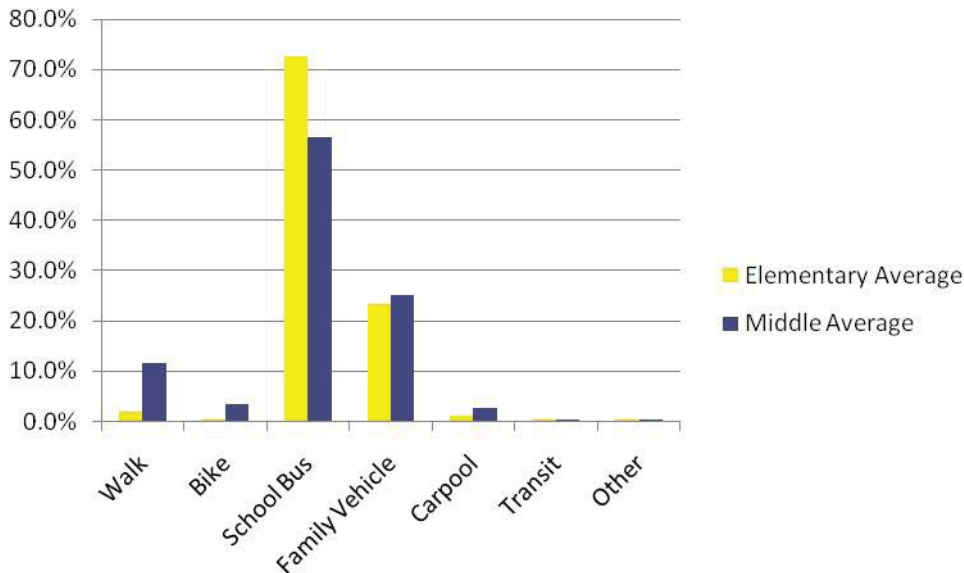


Table 6.2: K-8 Students Mode of Transportation to and from School

Schools \ Mode	Walk (%)	Bike (%)	School Bus (%)	Family Vehicle (%)	Carpool (%)	Transit (%)	Other (%)	All Modes (%)
Elementary Trips (K-4)								
Maple East	0.0	0.1	80.8	18.6	0.5	0.0	0.0	100
Maple West	3.0	0.5	68.4	25.9	1.6	0.0	0.6	100
Forest	3.1	0.2	71.4	24.0	1.2	0.0	0.1	100
Heim Elementary	3.8	0.8	72.6	21.8	0.8	0.0	0.2	100
Dodge	0.9	1.2	73.1	22.0	1.0	1.7	0.0	100
Country Parkway	0.9	0.0	69.8	28.2	1.2	0.0	0.0	100
Average	2.0	0.5	72.7	23.4	1.1	0.3	0.2	100
Middle Trips (5-8)								
Mill	14.0	2.4	55.4	24.7	2.8	0.0	0.7	100
Transit	10.0	3.9	64.6	19.1	2.3	0.0	0.1	100
Heim Middle	14.8	5.1	47.3	29.5	2.4	0.1	0.8	100
Casey	7.5	2.2	59.3	27.4	3.3	0.0	0.3	100
Average	11.6	3.4	56.7	25.2	2.7	0.0	0.5	100
K-8 Average	5.8	1.6	66.3	24.1	1.7	0.2	0.3	100

Data Source: Safe Routes to School Survey, Spring 2009

Mode of Transportation in the Morning versus Afternoon

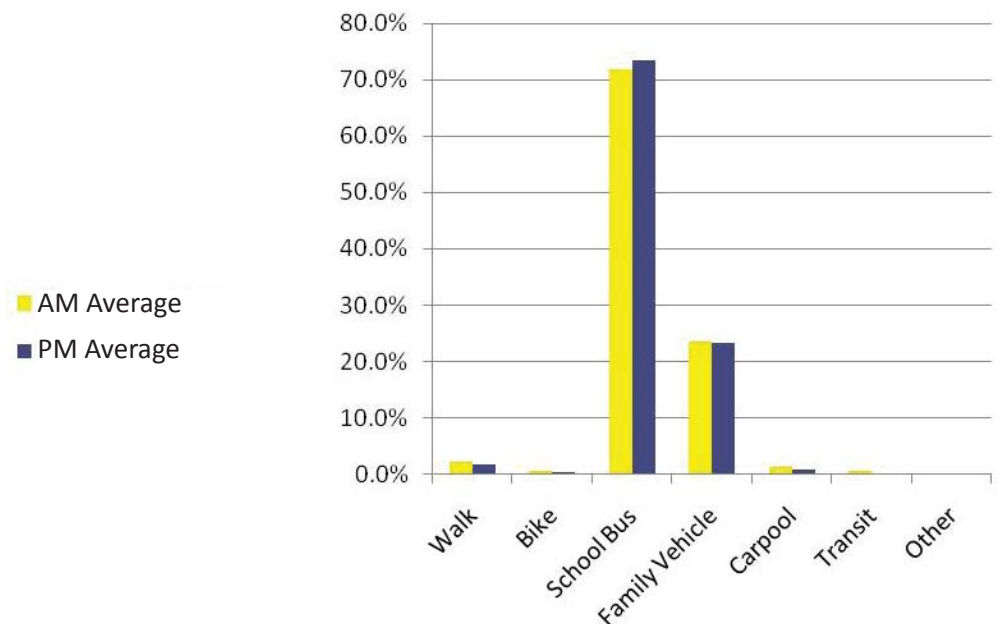
Elementary Schools

In the WCSD, more elementary students walk in the morning than in the afternoon (see Table 6.3 and Figure 6.3). In the afternoon, more students take the school bus than in the morning. The family vehicle is used equally, on average, in the mornings and the afternoons.

Forest and Heim Elementary schools have slightly more students who walk in the morning than afternoon. Maple West has the opposite, with more students walking in the afternoon than in the morning. Maple West and Heim Elementary have fewer students taking the school bus in the morning than in the afternoon, 8.8 and 6.9 percentage points less respectively. Country Parkway experiences the opposite behavior with 8.9 percentage points more students taking the school bus in the morning compared to the afternoon.

As stated above, Maple West Elementary had less students walk in the morning than in the afternoon. This is compensated by a higher number of students driven to school in the morning versus the afternoon. Heim Elementary had more students walk in the morning but less taking the school bus (compared to the afternoon numbers). Again, there was an increase in the number of students driven to school in the morning versus the afternoon. Country Parkway, which has more students taking the school bus in the morning than afternoon, had 10.0 percentage points fewer students being driven to school in the morning than afternoon.

Figure 6.3: Morning and Afternoon Modes of Transportation by Elementary School Students



Data Source: Safe Routes to School Survey, Spring 2009

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Table 6.3: Morning and Afternoon Modes of Transportation by Elementary School Students

Schools \ Mode	Walk (%)	Bike (%)	School Bus (%)	Family Vehicle (%)	Carpool (%)	Transit (%)	Other (%)	All Modes (%)
Morning Trips								
Maple East	0.1	0.1	81.9	17.2	0.8	0.0	0.0	100
Maple West	2.5	0.5	64.0	30.7	2.4	0.0	0.0	100
Forest	4.1	0.3	69.5	25.2	0.7	0.0	0.2	100
Heim Elementary	4.4	0.9	69.2	24.4	1.1	0.0	0.1	100
Dodge	1.0	1.4	72.6	20.3	1.3	3.4	0.1	100
Country Parkway	1.1	0.0	74.1	23.3	1.5	0.0	0.0	100
Morning Average	2.2	0.5	71.9	23.5	1.3	0.6	0.1	100
Afternoon Trips								
Maple East	0.0	0.1	79.7	20.1	0.2	0.0	0.0	100
Maple West	3.6	0.5	72.8	21.1	0.9	0.0	1.1	100
Forest	2.1	0.2	73.4	22.7	1.7	0.0	0.0	100
Heim Middle	3.3	0.8	76.1	19.1	0.4	0.0	0.3	100
Dodge	0.8	1.0	73.7	23.8	0.8	0.0	0.0	100
Country Parkway	0.6	0.0	65.2	33.3	1.0	0.0	0.0	100
Afternoon Average	1.7	0.4	73.5	23.4	0.8	0.0	0.2	100
% Point Difference	0.5	0.1	-1.6	0.1	0.5	0.6	-0.1	

Data Source: Safe Routes to School Survey, Spring 2009

Middle schools

Fewer students walk to school in the morning compared to the afternoon. In addition, more students are driven in the family vehicle in the morning compared to the afternoon. On average, there is a 10.3 percentage point increase in the number of students who walk in the afternoon as compared to morning. To compensate for this, more students are driven by the family vehicle in the morning when compared to the afternoon, an increase of 10.5 percentage points (see Figure 6.4 and Table 6.4).

Figure 6.4: Morning and Afternoon Modes of Transportation by Middle School Students

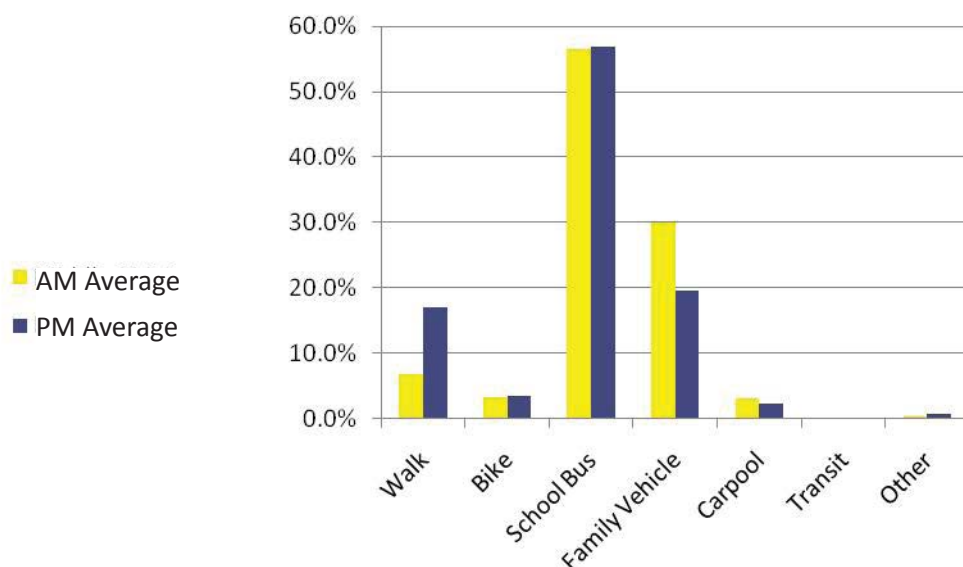


Table 6.4: Morning and Afternoon Modes of Transportation by Middle School Students

Schools \ Mode	Walk (%)	Bike (%)	School Bus (%)	Family Vehicle (%)	Carpool (%)	Transit (%)	Other (%)	All Modes (%)
Morning Trips								
Mill	6.1	2.4	58.9	29.2	2.8	0.0	0.6	100
Transit	7.5	3.8	60.7	24.4	3.4	0.0	0.2	100
Heim Middle	9.3	4.9	47.4	35.0	2.7	0.1	0.6	100
Casey	4.1	2.0	58.8	31.5	3.3	0.0	0.2	100
Morning Average	6.8	3.3	56.5	30.0	3.1	0.0	0.4	100
Afternoon Trips								
Mill	22.6	2.4	51.4	19.8	2.9	0.0	0.9	100
Transit	12.9	3.9	69.0	13.0	1.1	0.0	0.1	100
Heim Middle	21.5	5.4	47.1	22.6	2.1	0.1	1.1	100
Casey	11.4	2.4	60.0	22.5	3.2	0.0	0.5	100
Afternoon Average	17.1	3.5	56.9	19.5	2.3	0.0	0.7	100
% Point difference	-10.3	-0.2	-0.4	10.5	0.8	0.0	-0.3	100

Data Source: Safe Routes to School Survey, Spring 2009

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K-8 Students' Travel Time to or from School[¶]

In the Williamsville Central School District, 41.66% of students in grades K to 8 spend 10 minutes or less commuting to or from school, regardless of the mode of transportation. Another 39.26% of students spend 11 to 20 minutes commuting and 16.16% spend more than 20 minutes (see Table 6.5 and Figure 6.5).

Maple West Elementary has the most students (19.2%) who travel less than 5-minutes and Country Parkway has the least (8.46%). Heim Elementary has the most students (25%) who travel more than 20 minutes to or from school, and Dodge Elementary has the least (6.83%).

If a change in mode of transportation takes the student the same amount of time to get to or from school, the student may be more inclined to make this change. Also, travel time to or from school can be reduced by making it easier to access the school site and is not directly related to how close the students live to the school.

Figure 6.5: Average Travel Time to or from School

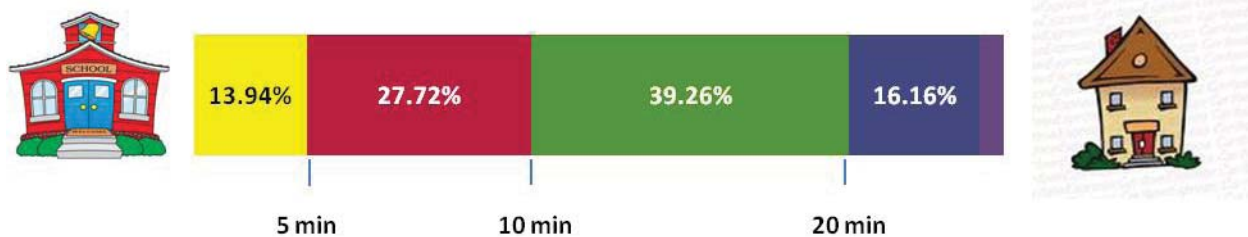


Table 6.5: Percentage of Student Trips to or from School by Travel Time

School	Percent of Students (%)					
	Less than 5 Min	5 to 10 Min	11 to 20 Min	More than 20 Min	Don't Know	All Trips
Elementary Schools						
Maple East	12.29	27.93	47.49	10.61	1.68	100
Maple West	19.20	21.43	38.39	19.64	1.34	100
Forest	11.35	26.49	31.35	24.32	6.49	100
Heim	15.00	20.77	36.15	25.00	3.08	100
Dodge	18.77	30.38	41.30	6.83	2.73	100
Country Parkway	8.46	34.83	38.81	14.93	2.99	100
Middle Schools						
Mill	8.88	26.65	43.84	17.19	3.44	100
Transit	9.22	29.13	41.26	16.99	3.40	100
Heim	18.18	30.30	34.47	15.15	1.89	100
Casey	18.05	29.27	39.51	10.98	2.20	100
Average	13.94	27.72	39.26	16.16	2.92	100

[¶] Data on travel time, distance, and mode is based in parents' reports to the SRTS survey, Spring 2009

Travel Time to School and Choice of Transportation Mode

The majority of students (47.25%) who travel for less than 5 minutes to school are driven in the family vehicle. However, the percentage of students who are driven to school in the family vehicle decreases substantially as the distance (in time) from school increases. For students who live beyond 5 minutes from school, the predominant mode is the school bus and use of this mode is more prevalent among students with longer commutes.

Walking and biking combined totals 11.89% for those who travel less than 5 minutes to school and 12.82% for those who travel 5 to 10 minutes to school. However this number decreases to 4.84% for students who are 11 to 20 minutes from school and decreases to 1.78% for students who are more than 20 minutes from school.

Figure 6.6: Student Trips within a Travel Time by Mode of Transportation

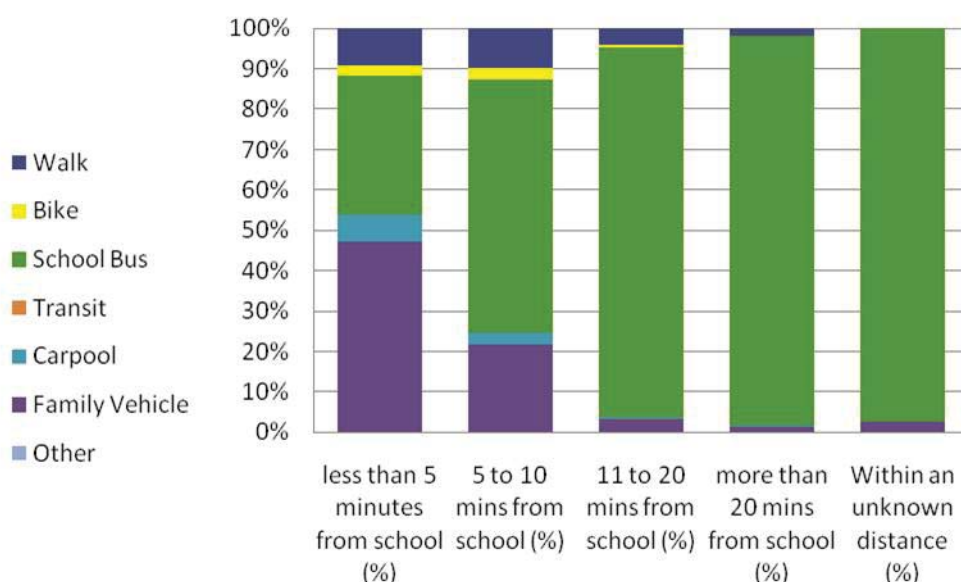


Table 6.6: Percentage of Student Trips within a Travel Time by Mode of Transportation

Mode	Travel Time	Less than 5 Min (%)	5 to 10 Min (%)	11 to 20 Min (%)	More than 20 Min (%)	Don't Know (%)	All trips (%)
Walk		9.28	9.79	4.15	1.78	0.00	5.95
Bike		2.61	3.03	0.69	0.00	0.00	1.49
School Bus		34.20	62.48	91.40	96.45	97.40	76.42
Family Vehicle		47.25	21.66	3.26	1.52	2.60	14.14
Carpool		6.67	3.03	0.30	0.25	0.00	1.92
Transit		0.00	0.00	0.20	0.00	0.00	0.08
Other		0.00	0.00	0.00	0.00	0.00	0.00
Total		100	100	100	100	100	100

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Mode of Transportation

An examination of each transportation mode reveals that walking and biking is most likely to occur within a distance of 5 to 10 minutes from a student's school. Travelling by school bus is the most favored mode when parents report living within 11 to 20 minutes from a school. Family vehicles are most commonly used when families live within 5 minutes from the school. The family vehicle is used very infrequently beyond 11 minutes from school where the school bus is the predominate mode of transportation.

Figure 6.7: Mode of Transportation

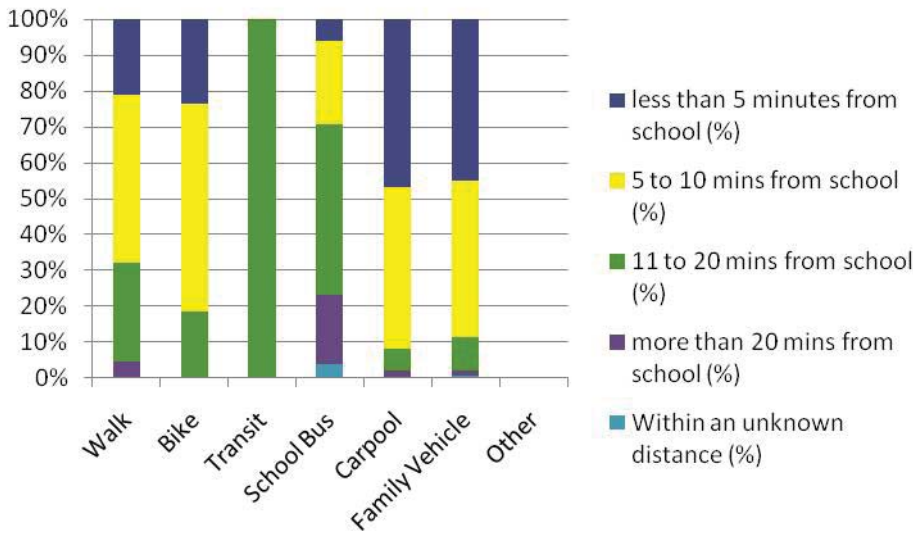


Table 6.7: Percentage of Student Trips by Mode of Transportation

Mode \ Distance	Less than 5 Min (%)	5 to 10 Min (%)	11 to 20 Min (%)	More than 20 Min (%)	Don't Know (%)	All trips (%)
Walk	21.05	46.71	27.63	4.61	0.00	100
Bike	23.68	57.89	18.42	0.00	0.00	100
Transit	0.00	0.00	100.00	0.00	0.00	100
School Bus	6.05	23.22	47.41	19.48	3.84	100
Carpool	46.94	44.90	6.12	2.04	0.00	100
Family Vehicle	45.15	43.49	9.14	1.66	0.55	100
Other	0.00	0.00	0.00	0.00	0.00	0
Total	13.51	28.40	39.64	15.43	3.02	100

Data Source: Safe Routes to School Survey, Spring 2009

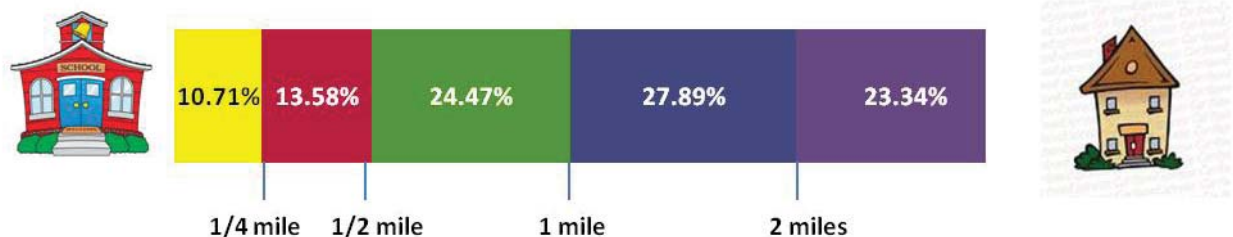
Students' Travel Distance to or from School

On average, 48.76% of students in the Williamsville Central School District live within 1 mile from their school. Another 27.89% live within a 1 to 2 mile distance and 23.34% are more than a 2 miles distance from their school. Forest Elementary has the most students within a ¼ mile radius with 18.02% and Maple East has the least with 3.53%. Maple East has the most students, 40.00%, that live more than 2 miles from their schools and Dodge Elementary has the fewest with 11.19%.

Table 6.8: Percentage of Student Trips by Travel Distance to or from School

Distance School	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 (%)	All Modes (%)
Elementary Schools						
Maple East	3.53	15.29	11.76	29.41	40.00	100
Maple West	16.04	21.93	31.55	19.79	10.70	100
Forest	18.02	9.30	20.93	26.16	25.58	100
Heim	8.33	9.52	22.22	21.43	38.49	100
Dodge	13.64	15.73	23.08	36.36	11.19	100
Country Parkway	12.56	10.05	23.12	17.09	37.19	100
Middle Schools						
Mill	3.93	7.55	25.68	44.71	18.13	100
Transit	9.49	11.54	22.82	38.97	17.18	100
Heim	12.98	15.27	34.35	16.79	20.61	100
Casey	8.56	19.65	29.22	28.21	14.36	100
Average	10.71	13.58	24.47	27.89	23.34	100

Figure 6.8: Travel Distance to or from School



Data Source: Safe Routes to School Survey, Spring 2009

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Distance and Mode of Transportation

Students who live less than ¼ mile from school were most likely to travel by school bus (52.5%). Walking to school comprised 28.33% of trips within ¼ mile from school and the family vehicle comprised 15.42%. Students who live ¼ to ½ mile from school increased their school bus trips to 72.1% and decreased their walking trips to 10.03% while family vehicle trips remained constant at 13.48%. As the distance to school increases, school bus trips continue to increase, walking trips continue to decrease and family vehicle trips stay constant.

Figure 6.9: Distance by Mode of Transportation

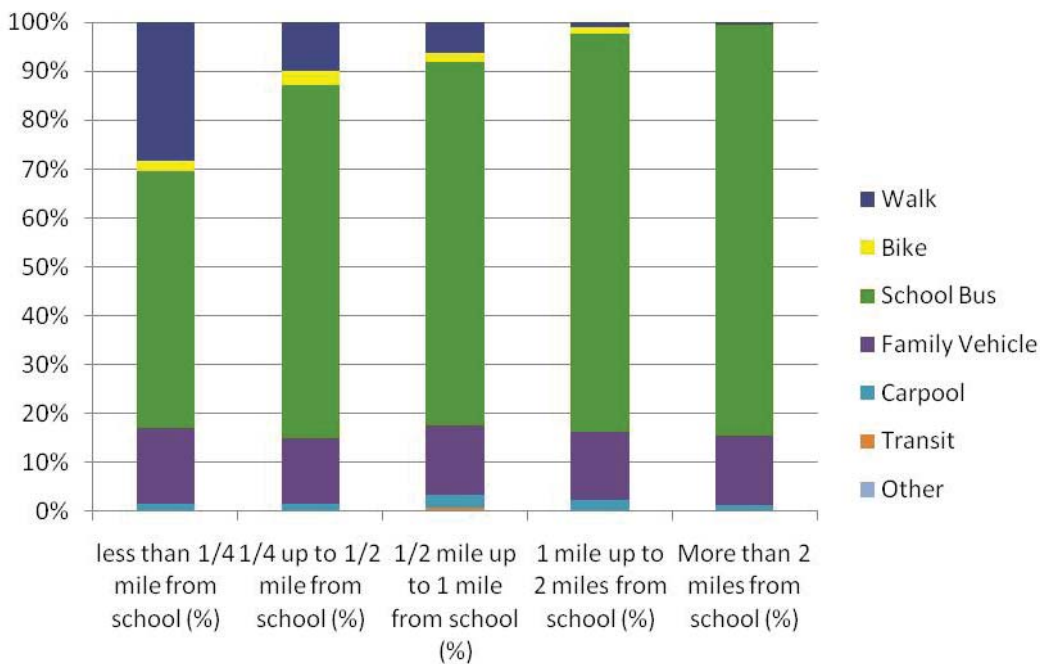


Table 6.9: Percentage of Student Trips by Distance and Mode of Transportation

Mode \ Distance	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 (%)	All trips (%)
Walk	28.33	10.03	6.29	1.08	0.36	6.02
Bike	2.08	2.82	1.82	1.21	0.00	1.38
School Bus	52.50	72.10	74.34	81.43	84.09	76.25
Family Vehicle	15.42	13.48	14.24	14.00	14.29	14.19
Carpool	1.67	1.57	2.65	2.29	1.27	1.99
Transit	0.00	0.00	0.66	0.00	0.00	0.16
Other	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100

Data Source: Safe Routes to School Survey, Spring 2009

Mode of Transportation by Distance

Walking as a mode of transportation to school is most likely to happen when the student is less than ¼ mile from school (45.95%). Walking to school is reduced drastically when the student lives more than 1 mile from school with only 6.76% of walking trips taking place beyond this distance. Bicycling as a mode of transportation to school is most likely to occur at a distance ½ mile to 1 mile from school. Students are willing to travel further by bicycle as compared to walking with 26.47% of trips being made at a distance of 1 to 2 miles from school. However, beyond 2 miles there are no bicycle trips that take place. School bus and family vehicle trips to school increase as the distance to school increases up to a distance of 2 miles from school with the most trips occurring at a distance of 1 to 2 miles from school.

Figure 6.10: Mode of Transportation by Distance

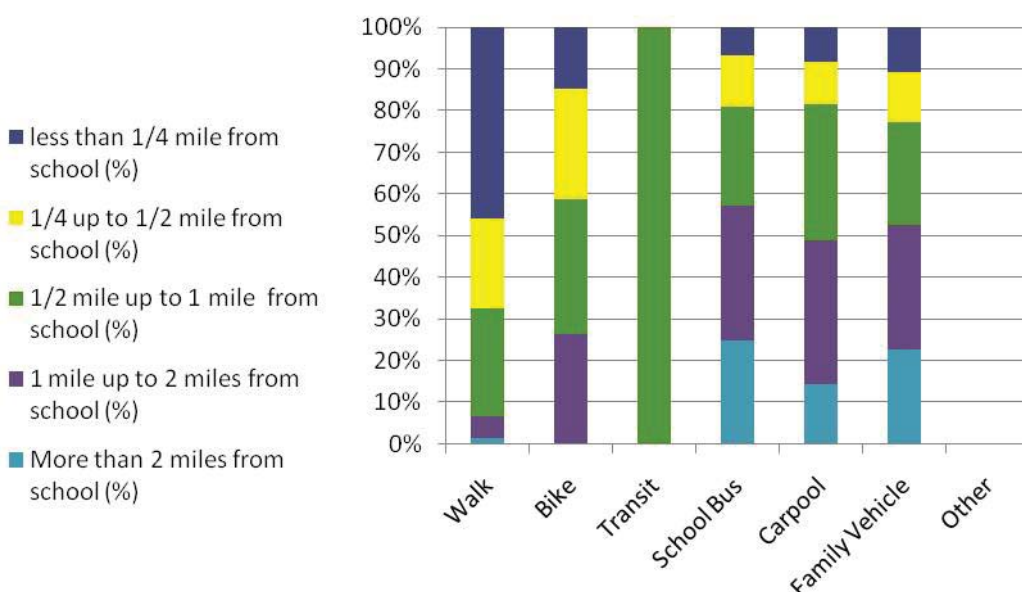


Table 6.10: Mode of Transportation by Distance

Mode \ Distance	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 (%)	All trips (%)
Walk	45.95	21.62	25.68	5.41	1.35	100
Bike	14.71	26.47	32.35	26.47	0.00	100
Transit	0.00	0.00	100.00	0.00	0.00	100
School Bus	6.72	12.27	23.95	32.27	24.80	100
Carpool	8.16	10.20	32.65	34.69	14.29	100
Family Vehicle	10.60	12.32	24.64	29.80	22.64	100
Other	0.00	0.00	0.00	0.00	0.00	0
Total	9.76	12.97	24.56	30.22	22.49	100

Data Source: Safe Routes to School Survey, Spring 2009

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Cost of Driving Children to Schools for Parents

According to the United States Department of Transit, residents in the Buffalo-Niagara region travel using personal vehicles an average of 19.8 miles daily [1]. With prices of gasoline increasing, personal vehicle use has become more expensive. The Williamsville Central School District planning area is no exception to this trend, where 15% of school trips occur by car. * Parents report convenience as a main reason for driving their children to school [2]. Reducing the usage of personal automobiles to drive children from home to school has at least two benefits, as shown by the following analysis. It reduces the costs of vehicle ownership for WCSD families. And, second, omitting these short drives from daily routines also reduces carbon emissions produced from personal vehicles.

Use of Personal Vehicles by Parents to Drive Children to School in the WCSD Planning Area

About 16% of parents of children in grades K-8 in the Williamsville Central School District drive their children to and from school.† Ironically, even among those families that live within a ¼ mile from school, 17% of parents report driving their children to school in a car.

Collectively, families who drive their children, grades K-8, to school in the WCSD planning area travel 80,453.15 miles every school year. In aggregate these driving distances are substantial considering many of these families live within a walking distance. For example, on average each family living within one mile of school drives 0.75 miles to school and 0.91 miles back each day. As proposed in the recommendations section, the “Kid Corridor Zone” would reduce this mileage.

Table 6.11. Vehicle Miles Driven by Parents in the Williamsville Central School District

Families living within	Miles Driven		
	Per Day		Per School Year
	Average Per Family that Drives		All Families that Drive
	To School	From School	To and From School
¼ mile	0.06	0.16	4,715.64
½ mile	0.38	0.75	16,063.83
1 mile	0.75	0.91	21,153.68
2 miles or greater	0.94	4.00	38,520.00
Total			80,453.15

* This data is based on parents’ report of the trips their children make to school (SRTS Survey)

† This percentage is based on estimates on the SRTS survey.

Economic Cost

Convenience is the primary benefit reported by parents who drive their children to school daily. Yet this ignores the cash savings to be had if children were to walk. Edit this foot note.[‡]

In total, families in the WCSD planning area using personal vehicles for school commutes are spending \$44,249.23 every school year. An example of the savings experienced by families living within the one mile “Kid Corridor Zone” will be an average savings of \$0.41 for the morning commute and another \$0.41 for the afternoon if they no longer drive children to school. At the end of the school year for all families living within the “Kid Corridor Zone” that dollar amount saved \$11,634.53.

Table 6.12. Costs Incurred by Parents in the Williamsville Central School District

Families living within	Cost of Driving (\$)		
	Per Day		Per School Year
	Average Per Family that Drives		All Families that Drive
	To School	From School	To and From School
¼ mile	0.04	0.07	2,593.60
½ mile	0.21	0.21	8,835.11
1 mile	0.41	0.41	11,634.53
2 miles or greater	0.52	0.50	21,186.00
Total			44,249.23

WCSD parents’ decision to drive their children to school while living within two miles collectively costs them \$21,549.66 per year. To put this cost into perspective, for the WCSD, the yearly total cost of driving to school is equivalent to 36,804 large coffees from Starbucks.

These results suggest that the economic cost of driving a child to school may not be a strong disincentive for residents who live within close proximity of their child’s school. However the money spent currently on driving children could be reallocated into a family based rewards program that involves all members of the household to encourage active commuting.

[‡] The cost of driving per family was determined using a rate of \$0.55 per mile, and a school year of 180 days. These rates were applied to the distances from home to school reported on the parent’s survey to calculate the daily cost incurred per family, per trip, as well as the collective dollar amount spent daily and yearly for the community.

6 - Commuting Conditions



Environmental Cost

Driving is a package deal. The benefit of increased access is accompanied by the increase in expenses for auto ownership and the increase in carbon dioxide emitted from personal vehicle use. Lessening the number of household trips made using personal vehicles will reduce the amount of carbon emissions.

The combined carbon emissions produced by personal vehicles used for children's commutes is 110,167.887 lbs for one year (this is equivalent to 52.8 metric tons of Carbon Dioxide). These emissions are equal to the amount of CO₂ produced from the deforestation of 341,206 acres, an area over 10 times the size of the Town of Amherst. To put this into perspective, in order to offset the carbon emissions produced by families living within the one mile "Kid Corridor Zone" each family would have to plant 51 trees every year.

Table 6.13. Carbon Emissions Produced by Parents Driving in the WCSD

Families living within	Carbon Emissions (lbs)		
	Per Day (lbs)		Per School Year (lbs)
	Average Per Family that Drives (lbs)		All Families that Drive (lbs)
	To School (lbs)	From School (lbs)	To and From School (lbs)
¼ mile	0.118	0.118	16,065.086
½ mile	0.355	0.355	15,203.920
1 mile	0.710	0.710	20,022.743
2 miles or greater	1.420	1.420	58,876.140
Total			110,167.887

Works Cited

1. *United States Department of Transportation Urbanized Areas 2007*. 2008.
2. McDonald, N. C., Aalborg, Annette (2009). "Why Parents Drive Children to School: Implications for Safe Routes to School Programs." *Journal of the American Planning Association* 75-3(June): 331 — 342.



Understanding the Physical and Social Environments that Affect Children Walking and Bicycling to School in Amherst: Case Studies in Two Neighborhoods

Figure 7.1 Auditors at Case Study Site



Image Source: Kid Corridors

The Town of Amherst is a bedroom community where a road network connects small residential subdivisions to commercial uses and adjacent communities. Maps illustrating the attendance areas for Williamsville Central School District (WCSD) elementary and middle schools can be found in Appendix G.

While attendance areas of WCSD schools span vast segments of the Town, the location of most schools is within the interior of residential areas, posing opportunities for many children to access school grounds without crossing major arterials. Absence of major roadway crossings promotes walking and bicycling.

In order to document the conditions of routes to school, the Planning Studio organized a detailed case study of two neighborhoods in the WCSD. Planning Studio members conducted a physical assessment to determine the availability and conditions of infrastructure, features, and amenities associated with walking and bicycling*.

Among the ten elementary and middle schools in the Williamsville Central School District, Planning Studio members selected the neighborhood surrounding Country Parkway Elementary School and the neighborhood surrounding Heim Elementary and Heim Middle Schools for inclusion in the case study. The Planning Studio a one mile zone around these schools, which and previous studies indicate to be a comfortable walking distance for children (See Figures 7.2 and 7.3) [1]. The Planning Studio members, herein referred to as auditors, visited these neighborhoods to evaluate the condition of the built environments found along school routes.

Overall, the case study reveals that these two sites have many opportunities for walking and bicycling. Conversely, some key components are missing, creating barriers to a child’s active commute to school. This chapter summarizes key findings from this case study.

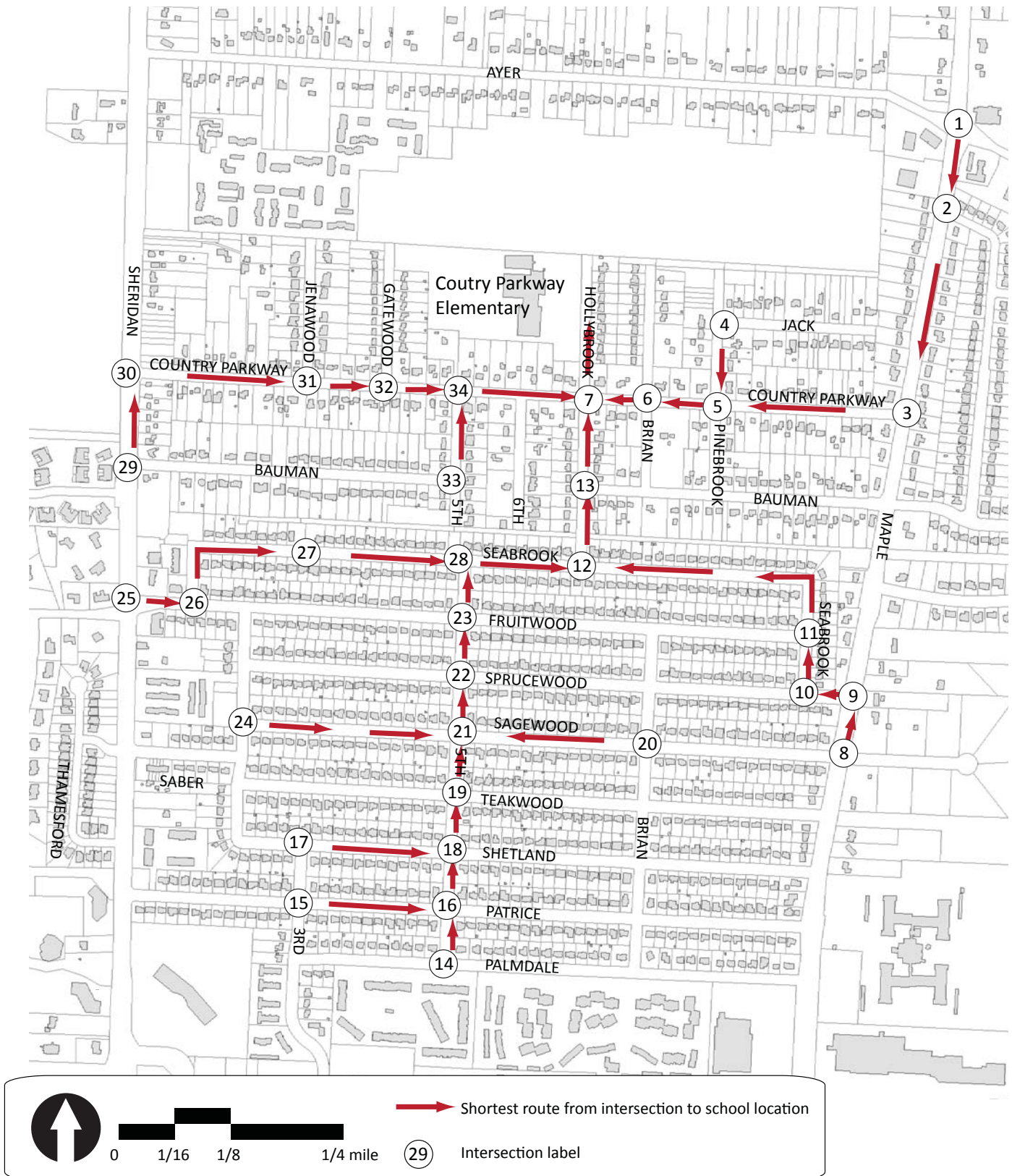
Table 7.1: Audited Street Segments and Intersections

Site	Intersections (no.)	Segments (no.)
Country Parkway Elem.	34	34
Heim Schools	50	50

* See details of case study methodology in Appendix D.



Figure 7.2: Assessment Area Around Country Parkway Elementary School*



* Routes and Intersections audited by studio members are shown by solid arrows and encircled numbers respectively.

Figure 7.3: Assessment Area Around Heim Elementary and Middle Schools





Findings

Opportunities for Walking and Bicycling Around Country Parkway School

Infrastructure

Sixty five percent of documented street segments audited in the Country Parkway Assessment Area have complete sidewalks on both sides of the street. Additionally, auditors rated 67% of existing sidewalks to be in good condition. A majority of existing sidewalks (98%) are three to six feet wide, and 96% of the street segments with sidewalks have a strip of grass or other material buffering pedestrians from the roadway. All segments with buffers are located at least three feet from the curb.

Auditors noted six all-way stops throughout the Country Parkway Assessment Area. One is at Hollybrook Drive and Country Parkway, and others are in close proximity to the school grounds along Country Parkway and 5th Avenue.

Most street segments documented (79%) have either highway- or pedestrian-style lighting available. A majority of these lighted segments (over 59%) have pedestrian-style lighting, equally spaced roughly 100 feet apart on alternating sides of the street.

Figure 7.4: Lighting and Signage around Country Parkway School



Image Source: Kid Corridors

Wayfinding and Neighborhood Legibility

While the attendance area that Country Parkway serves reaches across Transit Road into the Town of Clarence, major roadways enclose the one-mile Assessment Area, creating a distinct neighborhood. Maple Road, Transit Road, Sheridan Drive, and Ayer Road loosely encircle the area. Therefore, students living within the one-mile and within the Country Parkway Assessment Area would not need to cross any of these major roadways in order to access school grounds.

The Country Parkway Assessment Area consists of mostly linear right-of-ways, reinforcing the ease of neighborhood wayfinding and legibility. Auditors rated 99% of intersections and segments as easy to navigate. All 34 intersections evaluated in the Country Parkway Assessment Area are clearly marked with street name signs. Additionally, there are four streets that have no outlet, and each of these has a sign located at the nearest intersection or entrance to notify traffic.

Safety

Auditors gauged safety by observing behavior of drivers, the crossing conditions, and the auditors' personal perceptions of "safe" walking conditions.

Auditors agreed that the Country Parkway Assessment Area benefited from having "eyes on the street". Community members were aware of what was going on outside their homes; at least five residents came outside to inquire about the auditors' presence in their neighborhood.

A crossing guard arrived at the intersection of Hollybrook Drive and Country Parkway at 2:50 pm on the observation day. This guard remained at that site for approximately ten minutes. During this time, she aided a few students who arrived at the site on a northbound school bus.

During the observation period, auditors observed low to moderate traffic on 91% of segments. Auditors observed high traffic volume only on the outskirts of the Assessment Area, along Maple Road and Sheridan Drive. Auditors perceived the majority of intersections within the Assessment Area to be safe for crossing, with the exception of intersections along Maple Road and Sheridan Drive (that students attending Country Parkway would not have to cross to access school grounds). Additionally, auditors perceived the majority of segments to have safe bicycling conditions despite the lack of bicycle lanes[†]

[†] Auditors explain that low traffic volumes and the availability of a clearly marked shoulder contributes to this sense of safety for bicycling, although parents perceive these as unacceptable for children bicycling to school.



Community Presence

Studio members reported that people were present on 29% of the audited segments and intersections. Teens or adults were present on fifteen segments and children present on ten segments.

Observation records also indicate that community members were outside engaging in active behaviors. On 12 segments (35%), auditors observed teens or adults engaging in active behaviors. On five segments (15%), auditors observed children engaging in active behaviors.

Neighborhood Composition and Maintenance

The Country Parkway Assessment Area is largely residential with some office and retail space located on the outer edges. Auditors observed few homes with real estate signage posted, indicating low property turnover and suggesting neighborhood stability. Ninety-seven percent of the segments have buildings with windows at street level, indicating a human-scale environment.

Auditors rated a majority of the Assessment Area as attractive, signifying that homes were well-maintained, lawns were manicured, and the overall area was neat and appealing. None of the segments had graffiti present; litter was present on only one segment. Images of the Assessment Area reinforce these observations, depicting houses in good conditions with well-maintained landscaping.

Ease of Travel

Observation records reveal that the physical act of walking and bicycling is relatively easy within the Assessment Area. In terms of physical difficulty, auditors rated 87% of segments and intersections evaluated as easy or fairly easy to walk or bicycle. As previously mentioned, auditors rated 67% of existing sidewalks to be in good condition, suggesting few bumps or cracks along these routes that would cause difficulty traversing them. Auditors found curbcuts at intersections throughout the area that made successful sidewalk connections. However, it is unclear whether all the documented curbcuts are compliant with standards set by the American Disabilities Act for wheelchair access.

Figure 7.5: Sidewalks and Crosswalks Around Country Parkway School



Image Source: Kid Corridors



Barriers to Walking and Bicycling

Infrastructure

Twelve of the 34 street segments evaluated (35%) have sidewalks present on only one side of the roadway, causing pedestrians to cross the roadway frequently to connect to the school grounds. Moreover, sidewalk connections are missing along Hollybrook Drive and Country Parkway, which are the two key routes leading to the school.

Only four intersections within the Assessment Area have marked crosswalks. However, the locations of three of these crosswalks are at intersections of major roadways such as Sheridan Drive. As previously mentioned, students residing within the Assessment Area would not need to cross these major roadways in order to access school grounds. Therefore, only one intersection that students would potentially cross has a marked crosswalk.

Auditors found no marked bicycle lanes present in the Country Parkway Assessment Area. Auditors sometimes perceived a narrow shoulder, marked with a solid white line, to be a safe place for bicyclists to ride.

Twenty-one of the 34 segments do not have a posted speed limit sign. Additionally, there is no signage indicating a speed reduction within the vicinity of school grounds. The word “school” is marked within travel lanes on Country Parkway leading to Hollybrook Drive. However, these marks are faded.

Figure 7.6: Missing Sidewalk Connection in the Country Parkway Assessment Area



Image Source: Kid Corridors

Wayfinding and Neighborhood Legibility

Although street name signs clearly mark all intersections, few markings notify pedestrian or vehicular travelers that they are entering a school zone. Only one school zone sign is present within the Assessment Area. It is on Country Parkway and is visible only to northbound travelers approaching the school.

Safety

Auditors noted that pedestrian-scale lighting standards located along 5th Avenue. These fixtures potentially serve an aesthetic appeal rather than lighting the neighborhood. According to auditors, these lamps are not emitting enough light to illuminate the sidewalk or surroundings.

Furthermore, key routes in the Assessment Area are missing lighting altogether. A stretch of Country Parkway, spanning from Sheridan Drive to Jenawood Lane, has no lighting present. This street segment is nearly one-quarter mile long and serves 20 residential properties.

Community Presence

While people were present along segments throughout the Country Parkway Assessment Area during the audit, almost one-third of segments (29%) did not have people present during the observation period. Additionally, in areas where people were present, the number of people present was relatively low. Seventy-one percent of segments with people present only had between 1-3 people present, indicating there is not a critical mass of people present to support walking and bicycling behavior. Furthermore, only 14% of the segments with people present (5 of 34 segments) had children present.

Neighborhood Composition and Maintenance

The Country Parkway Assessment Area lacks a variety in types of land uses, creating a monotonous environment. Auditors sometimes perceived lack of destinations along the observation routes as dull or uninteresting. There are no amenities, such as public benches, water fountains, or trash receptacles, present in the Assessment Area. Additionally, architectural styles of homes are repetitive, and the colors of building exteriors are principally neutral.

Ease of Travel

Auditors documented that automobile traffic volume and speeds increased as distance from school increased. Likewise, the locations of intersections rated difficult or somewhat difficult to cross were primarily on the outskirts of the Assessment Area along Maple Road and Sheridan Drive. These observations reveal not only that main roads within the Assessment Area are potentially more dangerous for pedestrians and bicyclists but also that they are potentially more physically difficult to traverse. As previously mentioned, curbcuts are present, but they may not meet ADA guidelines for accessibility.



Opportunities for Walking and Bicycling Around Heim Elementary and Middle Schools

Infrastructure

Sixty percent (30) street segments in the Heim Assessment Area have complete sidewalks on both sides of the roadway. Additionally, auditors rated 88% of existing sidewalks to be in good condition. All of the existing sidewalks in this Assessment Area are three to six feet wide. Ninety-six percent of the street segments with sidewalks have a strip of grass or other material buffering the pedestrian from the roadway. All sidewalks with buffers within the Assessment Area are at least three feet from the curb.

Ninety percent (45) street segments have some type of lighting standard present. Pedestrian-style lighting standards are present on sixty four percent (32 of the 45) street segments. Typically, lighting standards in this Assessment Area are spaced roughly 100 feet apart on alternating sides of the street.

Figure 7.7: Sidewalks in Heim Assessment Area



Image Source: Kid Corridors

Wayfinding and Neighborhood Legibility

The Attendance Areas for Heim Schools covers about 1/4 of the WCSD. Moreover, Millersport Highway, North Forest Road, West Klein Road, and a former railroad right-of-way loosely demarcate the Heim Assessment Area. This demarcation creates at least three fairly legible neighborhoods: one covering the northern residences within the boundary, one covering the southeastern residences, and one covering the southwestern residences and businesses. All residences in the Assessment Area are within one-mile of the school grounds.

Auditors reported all of the evaluated intersections and segments to be legible and easy to navigate. Proper signage aids visitors through the winding streets and cul-de-sacs in the Assessment Area. All intersections have clearly marked, unobstructed street name signs. Auditors observed three of the five cul-de-sac intersections evaluated had “no outlet” signage present. Additionally, school zone signs are present in neighborhoods to the north and south of school grounds.

Safety

Similar to the Country Parkway Assessment Area, auditors in the Heim Assessment Area noted “eyes on the street”, indicating that community members are aware of happenings outside their home.

Also during the observation period, auditors experienced low to moderate traffic volume on 76% of the intersections and segments. Observers perceived traffic volume to increase towards the outer edges of the Assessment Area near Millersport Highway and North Forest Road.

In contrast to Country Parkway, the Heim Assessment Area has signage (on Heim Road) indicating a speed reduction during school hours. There is school zone signage within neighborhoods on the southern side of the school grounds.

Community Presence

Auditors observed people on 36% of the segments and intersections within the Heim Assessment Area. Thirty four percent (17) of Seventeen segments had teens or adults present, and twenty four percent (12) had children present.

Comparable to Country Parkway, auditors reported that some community members were outside, engaging in active behaviors. On thirteen segments (26%), auditors observed teens or adults engaging in active behaviors. On seven segments (14%), auditors observed children engaged in active behaviors.

Neighborhood Composition and Maintenance

The Heim Assessment Area is largely residential. However, office and retail development exists along Stahl Road, and the section of Millersport Highway within the Assessment Area has retail space and restaurant locations. The



rear of an office park shares frontage on Millersport Highway as well. Auditors observed few or no residences with real estate signage posted, indicating low property turnover and suggesting neighborhood stability similar to Country Parkway. Ninety-six percent of the segments have buildings with windows at street level, indicating a human-scale environment.

Auditors reported that 62% of the segments and intersections were attractive or very attractive for walking and 52% were attractive or very attractive for bicycling. Additionally, auditors considered a majority (68%) of the Assessment Area to have attractive environments. Homes within the area were well-maintained, landscapes were manicured, and the overall area was tidy and pleasing to auditors. Only one segment had litter or graffiti present.

Figure 7.8: Halloween Decorations in the Heim Assessment Area



Image Source: Kid Corridors

Ease of Travel

The physical act of walking and bicycling is comparatively easy within the Heim Assessment Area. In terms of physical difficulty, auditors reported 90% of segments and intersections to be easy or fairly easy to walk and bicycle. As previously mentioned, auditors rated 88% of existing sidewalks to be in good condition, suggesting few bumps or cracks along these routes that would be difficult to traverse. Auditors identified curbcuts at intersections throughout the area that made successful sidewalk connections. However, it is also unclear in this Assessment Area whether all the curbcuts documented are ADA compliant.

Barriers to Walking and Bicycling

Infrastructure

Forty percent of the segments evaluated in the Heim Assessment Area have sidewalks present on only one side of the roadway, requiring pedestrians to cross frequently to access school grounds. Sidewalk connections are missing along key routes throughout the area. Often segments audited along Heim Road, three are missing sidewalk connections. Furthermore, auditors found a notable missing link on Deer Ridge in direct proximity to school grounds. On this route, the southern portion of sidewalk ends roughly 200 feet short of the intersection of Deer Ridge and Deer Ridge Court. This intersection connects the northern portion of the Heim Attendance Area to the northern entrance of the school grounds.

As observed in Country Parkway, the Heim Assessment Area has no marked bicycle lanes but has, along some routes, a narrow shoulder marked with a solid white line that auditors sometimes perceived to be a safe place for bicyclists in the right-of-way.

Over half of the segments evaluated (29 of 50) do not have posted speed limit signs.

On several accounts, auditors agreed that the Heim Assessment Area has some complicated crossing conditions. Only six intersections (12%) surrounding the Heim Schools have marked crosswalks present. Of these six, four intersections are in direct proximity to the school. Typically, intersections along Heim and other roads within the neighborhoods do not have marked crosswalks.

Only four intersections (8%) have all-way stops. Auditors documented a three-way stop condition at the Ball Street entrance to school grounds; the locations of other all-way stops are located at intersections adjacent to this entrance.

Auditors rated 17 of the 50 intersections to be somewhat inconvenient or inconvenient to cross. Of these 17, six are located on Heim Road.



Wayfinding and Neighborhood Legibility

Although signage intended to aid travelers is present throughout the Assessment Area, winding streets can be difficult to navigate and confusing to pedestrians. Despite the winding roads, auditors, equipped with detailed area maps, rated all of the street segments and intersections easy or fairly easy to navigate. Conversely, auditors noted two areas where navigation was somewhat confusing: where Countryside Lane splits at Autumnview Lane and also where Fairglen Drive, Markely Drive, Radcliffe Court meet.

Safety

As missing infrastructure described above indicates, there are several crossing conditions that auditors considered unsafe for pedestrians. Auditors rated nearly half (21 of 50) of the intersections to be unsafe or not very safe to cross. While many of these unsafe intersections are located along the perimeter of the Heim Schools Attendance Areas, auditors considered all ten intersections evaluated along Heim Road to be unsafe or not very safe to cross.

Auditors observed the most notable safety obstacles on Stahl Road. On this route, sidewalks are located along commercial property, which is across the street from a residential community that is not otherwise connected to school grounds. Students walking on Wyeth Drive and Stahl Road must cross the road, heading away from school grounds, to access available sidewalks in front of commercial property. Furthermore, auditors rated the intersection at North Forest Road and Stahl Road to be unsafe to cross. This intersection exhibited high traffic levels during the observation period and does not have a marked crosswalk present.

No crossing guards were present in the assessment area during the observation period.

Auditors noted bicycling to be relatively safe within the Assessment Area. However, auditors rated North Forest Road unsafe for bicycling.

Figure 7.9: Infrastructure in Heim Assessment Area



Image Source: Kid Corridors

Although auditors observed the presence of people throughout the Heim Assessment Area, 60% of segments and intersections had no people present at all. Similar to Country Parkway, most segments with people present (80%) had only 1-3 people each, indicating there is not a critical mass of people engaging in walking and bicycling.

Auditors observed children on only 12 segments (24%) within the Heim Assessment Area.

The interior neighborhood of the Heim Schools Assessment Area lacks variety of land use. The neighborhood makeup is similar to Country Parkway, with neutral colored houses that blended indistinctive architectural styles. Additionally, there are no amenities to support outside activities, no street furniture, and no play areas. The former railroad line/utility easement appeared to be a fun environment for passersby to visit, however signage clearly indicated this was not a safe place for children to play. Major roadways such as Heim, North Forest and Stahl were all perceived to be unattractive.

It is important to note that many of the segments and intersections rated as unattractive, unsafe or difficult to navigate are located along Heim Road, which leads directly to the northern school grounds entrance.

As mentioned previously, the Heim Assessment Area is more difficult to navigate because of its' windy roads. However, the Assessment Area is almost entirely pedestrian friendly with the exception of a few of the audited segments. The segments where auditors indicated a lack of sidewalk are in the area where the Town's Safe Routes to School proposal intends to install connecting links. However, one segment located along Deer Ridge Court is missing sidewalk but is not in the proposed sidewalk installation area. As Deer Ridge Court is one of the entrances to the schools, this segment should receive sidewalk infrastructure in order to appeal to students walking or bicycling to and from school.

In addition to missing infrastructure and safety concerns, the Heim Assessment Area is more physically difficult to traverse than Country Parkway. Auditors rated ten segments within the area to be difficult or moderately difficult to traverse. Interestingly, five of these segments are located along North Forest Road, which is adjacent to the University at Buffalo Bicycle Path, an accessible and walkable pathway that does not connect to the community in this area. The remaining five physically difficult segments are located along Heim Road.

Figure 7.10: Speed Sign in Heim Assessment Area



Image Source: Kid Corridors

Works Cited

1. *Safe Routes to School Handbook*. 2005, Michigan Fitness Foundation and Michigan Department of Transportation p. 1-12.



Based on the current findings, the following are significant barriers and opportunities for active commuting for youth in the Williamsville Central School District (WCSD) in the Town of Amherst.

Key Barriers

Lack of Safety Resulting from Traffic

The Town's road network includes some physical barriers that prevent children from actively commuting. Parents cite busy roads and intersections, high traffic volume, high speeds, and dangerous drivers as reasons why parents do not allow their children to commute actively. Many children must cross one of the Town's main streets to reach school; these roads, such as Sheridan and Transit Roads, have high traffic volume and higher speed limits for cars. The potential for injury from automobile traffic violations, such as speeding and erratic driving, concerns parents.

Figure 8.1: Driver Using Horn



Image Source: www.gettyimages.com

Parental Perception of Crime

While Amherst has low crime rates, parental perception of crime is a major barrier for active commuting. Parents indicate that fear of child abduction or child exploitation is a major factor preventing them from allowing their children to walk to school.

Poor Condition or Lack of Physical Infrastructure

Physical infrastructure impediments play a major role in preventing active commuting. The lack of consistent snow removal, furthered by the lack of enforcement of snow removal regulations, is a major concern for parents. Poor conditions of existing infrastructure, such as poor sidewalk surface conditions, the absence of sidewalks, the lack of connectivity, poor lighting, and unsafe or inconvenient bicycle rack locations, contribute to the concerns of parents.

Culture of Not Walking

The way children commute to school today differs drastically from the way children commuted 50 years ago (see Chapter Three for more information). These are partly the result of changes in lifestyles. These changes not only affect how children get to school and how they get home from school but also how they spend their free time. Parents express concerns over the extent of leisure time spent in sedentary activities. Time spent playing video games is one example.

8 - Key Findings



Low Density Development

A community with low development density is less walkable than an area with high density. Amherst has low density, which can make commutes longer and less interesting for children. Children indicate that they want “destinations” along their commuting routes. Destinations include parks, stores, and recreation sites. The lack of mixed-use development and destinations along routes creates barriers for active commuting.

High Vehicle Ownership

High vehicle ownership is a product of economic factors. High vehicle ownership rates are associated with low rates of active commuting (see Chapter Three for more information). The Town of Amherst has relatively high rates of vehicle ownership when compared to Erie County and New York State.

Work Day and School Start Times

Parents indicate convenience as a reason why they drive their children to school in the morning. Currently, school and work commutes begin around the same time, which creates morning time pressures. Parents indicate that it is inconvenient to help their children walk to school (see safety concerns above for reasons why children are not allowed to commute alone).

Distance to School

Parents express concern over the distance a child must travel on their route from home to school. For example, some parents state that their homes are in the attendance zone for a school that is far from their home while an alternative school is within walking distance. Concerns over distance to school also include concerns about time constraints and safety.

Physical Strain

Children currently carry multiple items to school each day. Students carry books and school materials, extracurricular materials, and their lunches. The potential physical strain or injury due to walking with a large load concerns parents. Additionally, some students may not be able to commute actively while carrying all of these items.

Restrictive Legal Language

The state transportation law that regulates the New York State Safe Routes to School Program (SRTS) is a narrow interpretation of the establishing federal law (see Chapter Five for more information). The state law emphasizes reduction of physical impediments to youth when walking or bicycling to school. The federal law includes language that promotes enabling and encouraging children to walk and bicycle to school, which is absent from the state law. Although state SRTS programs cannot violate federal laws and guidelines, a difference in emphasis is discernible in the laws.

Key Opportunities

Perspective and Enthusiasm of Youth

The WCSD is the largest suburban school district in Western New York and serves over 10,000 children. Based on comments from the Visioning Session and the Interactive Assembly, the youth of the WCSD are interested in contributing to the planning process. The students were eager to share their ideas about active commuting, their neighborhoods, and what they would like to see changed. In addition, research shows that children are more likely to support a plan if they are involved in the planning process (see Appendix D for more information). A large youth population willing and eager to contribute creates a great opportunity for active commuting. The Visioning Session and the Interactive Assembly reveal that some barriers indicated by parents, such as snow and leaf pile obstructions, are actually opportunities according to children. The flexibility and enthusiasm of youth are opportunities for creative promotion of active commuting.

Figure 8.2: Children Playing



Image Source: www.gettyimages.com

Importance of Physical Activity

Parents in Amherst indicate that physical activity is important and that their children are active in ways other than active commuting. This understanding of the importance of daily exercise is an opportunity to garner support for active commuting within the WCSD. Additionally, Amherst is affluent and well educated, two factors that lead to higher levels of physical activity.

Economic Opportunities

Residents of Amherst are economically well-positioned to help fund active commuting initiatives. Between the residents and existing external funding, such as the SRTS funding, there are many opportunities for forward movement.

Community Support

There are many opportunities within the Town and the WCSD for community partnerships and support. The non-profit entities that already support the community, such as the Williamsville Education Foundation and the Parent Teacher Student Association, are well poised to help in new ways. In addition to non-profits, the various committees, boards, and councils, which have connections to the Town government, can provide support and insight.

Legal and Municipal Support

The governing federal law provides language that supports engagement and encouragement to commute actively to school. Existing municipal department programs and boards, such as the Youth Board and the Amherst Police Citizen Academy, provide opportunities for additional support for active commuting to school.

8 - Key Findings



Low Crime Levels

Research has shown that the lower the crime rates, the more likely people are to commute actively. The Town has low crime rates, which is an incredible opportunity for active commuting. Creating safe routes to school for children is easier in a town that is already safe.

Low Housing Vacancy

Amherst has low vacancy rates, which are affiliated with high walkability. Low vacancy coupled with observed pedestrian foot traffic allow for opportunities for an “eyes on the street” safety network. Residents’ willingness to approach studio members while on-site during the neighborhood audits is indicative of their interest and engagement in the neighborhood.

Conclusion

Although there are barriers that inhibit active commuting, many opportunities exist that can help address these concerns. Through partnerships between youth, parents, non-profit organizations, and municipal entities, there are many opportunities for encouraging active commuting to school.

Figure 8.3: Crossing Guard

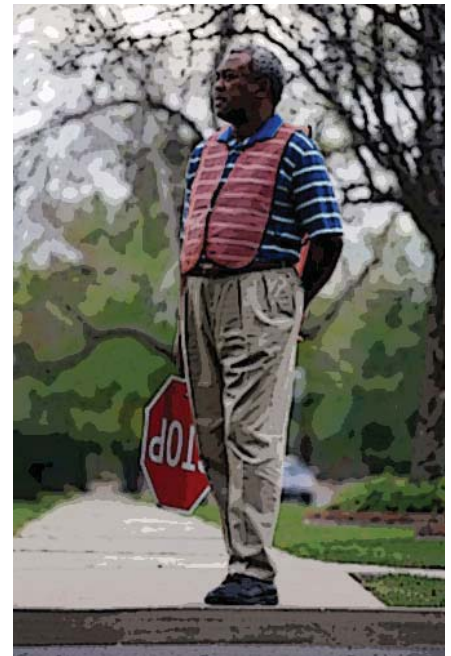


Image Source: www.gettyimages.com



Overview of Communities' Efforts to Educate and Encourage Walking and Bicycling to School in North America

There are many wonderful examples of active commuting taking place around the world. Precedent research tells us what other communities, and people, are doing to facilitate active commuting. To better understand precedents for active commuting, examples were taken from 19 places, either cities, counties, or states, that are examples that could apply to the Town of Amherst. These locations were chosen for study because of character similarities such as population, climate, or because they possessed an exceptional program.

This review of best practices examines the following key areas: informational efforts by communities, public policy and plans to support active commuting, educational curriculum to teach active commuting skills, programmatic efforts to support active commuting, safety measures, physical infrastructure, and financing mechanisms to pay for active commuting initiatives.

Best practices are summarized in Table 9.1. Descriptions of the programs, policies, and activities summarized follow the table.

9 - Best Practices



Table 9.1: Summary of Best Practices

Information	Mapping
	Web-Based Information
Curriculum	Student Instruction in School Settings
	Educational Training for Professionals
Programs	Mileage Clubs
	Walking School Bus
Safety Measures	Pedestrian License Program
	Bicycle Riders License Program
	Safe Places
Physical Infrastructure Improvements	Signage
	Intersection Improvements
	Sidewalks
Public Financial Support	Taxation
	User-Impact Fees
	Fines
Policies & Legislation	Laws
	Statutes
	Standards
	Coalitions
Adopted Plans	Safe Routes to School Plans

The City of Rochester School District identifies the safest walking routes and distributes maps for students and their parents. Map materials instruct parents to work with students to pick their route together.

In Columbia MO, through nonprofit PedNet.org, organizers reach thousands of users, solicit volunteers, motivate students, disseminate information, and sign up participants for walking school buses at 11 elementary schools.

In Portland, OR pedestrian lesson plans are instructed to students in grades K-3. Biking lesson plans are instructed to students in grades 4-7. Topics include vocabulary, exercise, safety, signage, and navigation.

Across Michigan, the Department of Transportation holds a one day workshop for planners and school officials to receive information and training using Safe Routes to Schools material.

The IWALK Club in ON., Canada promotes walking by rewarding students who tally mileage and trips. Prizes are awarded to students who walk or bicycle to school the most.

In Burlington, VT a Walking School Bus program is organized by C.P. Smith Elementary School students and parents. Parent volunteers designate safe routes, schedule departures, and create meeting points to ensure students get home safely. Every Wednesday morning, small groups of students depart from a designated leader's house, while others are picked up along the way.

In Stuttgart, Germany children are required to obtain a license to walk to school alone. Pedestrian safety is taught in the classroom by police officers and students must satisfactorily complete a skills test to obtain their license.

Similar to the pedestrian licence, municipalities across Germany require bicycle licenses for students who bike to school. Students are taught bicycle safety as a regular part of their elementary education; bicycle skills tests are offered in grade 3.

Students across Germany can access safe places that are identified by a sticker. Community certified businesses shelter children who feel threatened or need help.

Champaign-Urbana, IL utilized SRTS grant funding to enhance signage within school zones.

Champaign-Urbana, IL utilized SRTS funding to repaint crosswalks in the vicinity of school zones.

Alexandria, VA improved connections in school neighborhoods by constructing sidewalks where previously none existed.

Marin County, CA dedicates a portion of sales tax revenue to sustaining their Safe Route to School programming.

Colwood, BC dedicates a portion of industrial user-impact fees to pay for safety features such as crossing guards.

In Denver, CO, fines levied from traffic infractions offset the costs associated with the local Safe Routes to School program.

New York State allows bicycling on sidewalks.

Maine's Bicycle Safety Education Act requires schools to incorporate pedestrian and bicycle safety education in annual curriculum.

In Rochester, NY, transportation contractors are encouraged to follow the FHWA Nation Manual of Uniform Traffic Control Devices

In Denver, CO the city council adopted a resolution to form a Safe Routes to School Coalition of stakeholders to develop the "Denver Safe Routes to School Strategic Plan".

Santa Clarita, CA; Marin County, CA; Marshfield, WI; and Denver, CO have adopted comprehensive plans to address their SRTS programs.



Informational Materials and Campaigns

The distribution of relevant, accurate informational materials is a key to encouraging children to walk and bicycle to school safely and conveniently. Many communities such as Rochester, New York; Columbia, Missouri; and Marshfield, Wisconsin have developed materials and embarked on campaigns to inform their residents about opportunities for children to walk or ride bicycles to school safely. Some communities rely on traditional forms of media while others have successfully used new technologies via the internet.

Maps

In the City of Rochester, walking route maps, prepared by City staff, are sent home to students in the Rochester School District. The maps include find safety tips for parents and children. Safety tips are provided in both English and Spanish. (See 'Programs,' later in this chapter, for further discussion.)

Websites

Efforts to encourage walking and biking to school in Columbia, Missouri's are promoted through a website, Pednet.org, run by a nonprofit organization, the Pedestrian and Pedaling Network. The website allows parents to receive updates about local activities on active commuting, sign up as volunteer for active commuting events, and sign up their children to participate in these events. The website also includes information about available programs, such as a schedule of a walking school bus [1] an idea more fully described under programs.

Traditional Media

Marshfield, Wisconsin is using a traditional media campaign based on the advice of its Safe Routes to School Plan Task Force. The community uses posters, letters, email, and newspaper articles to promote walking or bicycling to school as part of their encouragement portion of the Safe Routes to School program.

Curriculum to Encourage Active Commuting to School

Without educating children and their parents about the importance of, and the manner in which, children can walk and bicycle to school safely and conveniently, active commuting rates are unlikely to increase. Across the country, a number of states, cities, and school districts have developed educational curricula used for teaching students the value of walking or bicycling through lessons in math, geography, and social studies. Some communities have also developed materials to educate teachers and the community as a whole about the benefits of children walking or bicycling to school. We report efforts in the cities of Portland (OR) and New York (NY) and state-wide efforts in Michigan.

Figure 9.1: Walking Route Map Created by Planning Studio Members



Data Source: Town of Amherst

Figure 9.2: An Instructor Teaches About Signage in Portland



Figure 9.3: Students Biking on a Designated Pathway in Portland



Image Source: www.bikeportland.org

Portland, Oregon

In Portland, Oregon the Bicycle Transportation Alliance (BTA), a non-profit organization whose mission is to “create healthy, sustainable communities by making bicycling safer, more convenient and more accessible”[2], has developed a comprehensive active commuting curriculum for implementation in Portland area schools. The BTA curriculum includes distinct lessons for bicycling and walking.

The walking curriculum is designed to be instructed to students at the 2nd grade level. The curriculum is implemented through two lesson plans that are recommended to be taught on different days. The first portion of the walking curriculum teaches children vocabulary and the importance of walking to school. The second lesson plan of the walking curriculum is more interactive and includes a field trip consisting of a walk in the neighborhood surrounding the school. This exercise exposes students to real life scenarios they might normally encounter if they were walking by themselves. Students are taught how to cross the street, the meaning of pedestrian signage, the meaning of road markings, and fundamentals of Oregon’s traffic law.

The second curriculum, bicycle safety, is intended for students in grades 4-7. This curriculum includes 10 one-hour lessons: 4 lessons are taught in the classroom, the remaining 6 lessons are practice-based wherein students are required to be on their bicycle. During these lessons, students are taught multiple aspects of bicycling including rules of the road, hazard safety and intersection navigation, learning to control a bicycle, helmet fittings, and proper bicycle size.

The curriculum is delivered to the students in one of two ways: the school contracts the BTA to host assemblies and classes, or the school can purchase the curriculum and instruct the students using their own teachers and instructors. If the school requests their assistance, Portland BTA staff and volunteers train teachers (and other volunteers) to teach the bicycle and pedestrian curriculum to school children.

The Portland BTA has been active in Portland, Oregon since 1990. However it was not until 2000 that the Portland schools began implementing school-wide safe routes to school program. Yet only after the first year of instruction, a 5% increase in students biking to school, and a 24% increase in students walking to school has been reported [3]. To date the BTA estimates that over 50,000 [4] students have received instruction using BTA materials.



New York, New York

The New York City School District is taking an active role in teaching students about walking and bicycling safely to school by implementing an educational curriculum to teach traffic safety, and is one of few to do so in the state of New York. The New York City Department of Transportation, along with the New York City Department of Education, has developed the “Traffic Safety Unit of Study”, a curriculum intended to instruct students in grades k-5 about being safe while on the street, and while in automobiles. The New York curriculum is divided into 5 “modules.” Some modules are grade-specific, while others are applicable for all grades.

Lessons in the curriculum include map reading, writing, determining routes to school, and traffic safety. Each lesson consists of a discussion or core lesson, then a follow-up activity. The curriculum teaches bike and pedestrian safety in a broad spectrum. Lessons include safe automobile passenger habits, and “Safety on Wheels” which includes roller skating and skateboard safety lessons [5]. The New York City curriculum promotes student safety habits, instructed in the classroom, outside of the school setting [5].

Michigan

It is important that professional planners, school officials and community members involved in Safe Routes to School be properly educated on the program. Below is an example of a training program in Michigan that offers an informational workshop for professionals.

The Michigan Association of Planning (MAP) is working with national programs and experts to educate and train professionals about the importance of community practices and policies that can encourage people to walk, bike, and use public transit systems more frequently. The program, called Transforming Transportation, is aimed at educating professionals on three national programs:

- Michigan Safe Routes to School (SR2S) - SR2S’s program goal is to enable and encourage students to walk and roll (i.e., bicycle, skate, rollerblade) to school when the distance is reasonable and routes are safe
- Context Sensitive Solutions (CSS) – Michigan Department of Transportation’s evolving model for engaging local government in the road planning process
- Complete Streets (CS) - An approach to design that ensures that transportation planners and engineers consistently design and operate the roadway with all users in mind - including bicyclists, public transportation vehicles and riders and pedestrians of all ages and abilities.

Each of these programs provides a framework to reduce reliance on automobiles, improve traffic congestion, promote healthy exercise options for children, and develop a community-friendly transportation plan built on community connection and public engagement.

MAP conducts workshops throughout the year, funded by the Michigan Department of Transportation Context Sensitive Solutions program and the Michigan Safe Routes to School program. The goal of each workshop is to

educate professionals about planning and design of transportation networks, promote and support community participation, health, and sustainability while enhancing mobility for all.

Programs

It is not enough to just educate children and parents about the benefits of walking to school; inclusive activities must also occur to demonstrate the accessibility of active commuting. Many communities in the United States have implemented innovative programs* to educate and encourage children to walk to school. Outlined here is a sampling of programs taken from around the country.

Figure 9.4: Children Participating in a Bike Rodeo



Image Source: www.flickr.com

Bicycle Rodeo

Many schools across the country are institutionalizing Bicycle Rodeos into school lesson plans as a way to educate children about bicycle safety. A Bicycle Rodeo is an instructional activity that teaches children ages 5 and up the importance of bicycle safety. Often the local police department conducts the rodeo, however teachers or parent volunteers may instruct the course. Rodeos typically take place in a parking lot or gymnasium with props that create an environment similar to a roadway. Bicycle rodeos allow children to practice bicycle techniques and learn the rules of the road, proper bicycle maintenance, and safety.

In Rockville, Maryland bicycle rodeos take place at all elementary schools. Bicycle Rodeos started in 2004 as a public initiative by the City of Rockville and are now organized by physical education instructors at each school. The Bicycle Rodeos are incorporated into the school's lesson plans which are tailored for each grade. Students in grades 3 -5 learn bicycle laws, rules of the road, and practice actual bicycle scenarios in simulated roadways. Since the City of Rockville initiated this program, elementary schools are experiencing more students biking to school. [6]

Mileage Club

Mileage clubs are a fun and rewarding way to encourage students to actively commute to school. They are typically organized as classroom competitions where students track the miles walked or biked to school. The clubs are flexible as to how they can be organized, but the focus is to promote healthier, more physically active children.

The IWALK Club is a program in Ontario, Canada that is a collaborative initiative between Active and Safe Routes to School and Green Communities, a national organization of nonprofits that focuses on healthy communities. IWALK Club promotes walking and other forms of active commuting by using incentives and rewards.

Figure 9.5 IWALK Logo



Logo Source: www.walktoschool-usa.org

* For the context of this report, programs are defined as those that occur separate from normal school activities.

9 - Best Practices



The IWALK Club has 4 main goals:

- Reduce car trips to the school
- Encourage walking and other active travel
- Reduce pollution and climate change emissions
- Promote healthier lifestyle choices for students and their families

Schools that are interested in participating are required to register for the IWALK Club and complete a short questionnaire which serves as a baseline of measure for each school. The students receive an IWALK punch card for participating. The more students that actively commute the more rewards and incentives they can receive, such as an extra recess or the awarding of a 'golden shoe award'. By participating in the IWALK Club, students will be involved in a province wide challenge where classrooms try to walk around the world measuring the number of miles walked or bicycled to school. An important component of IWALK is linking activities of the classroom curriculum (science, math, geography and others) to the importance of daily physical activity and traffic safety and awareness.[7]

Green Communities periodically evaluates each registered school for progress and compares it to the baseline information provided when the school registered to participate. Schools that show a measurable difference in student participation are entered into a drawing for three grand prizes, awarded each year during International Walk to School Week.

Walking School Bus

A Walking School Bus (WSB) is an activity in which a group of children walk or bicycle to school together accompanied by one or more adults on a designated route, usually on a regular schedule. The idea of a Walking School Bus draws on the notion that there is safety in numbers. WSBs are becoming increasingly common in many communities, including successful examples in Burlington, VT and Sacramento, CA.

WSB efforts around the country are largely led by parent volunteers. Parent organizers have to typically consider the following two issues before starting a WSB:

- Identify routes that are easily accessible to children and be in the vicinity of the school.
- Organizers must use a parent consent form to address liability concerns before the children are able to participate in the WSB.

A WSB can be made more appealing and encouraging if children are allowed to name their bus, have theme days and if children are provided with a 'book bag tag' or other emblem.

In Burlington, Vermont a Walking School Bus program was launched at the C.P. Smith Elementary School in 2005. This WSB was started by a group of parent volunteers who planned a designated route to school, scheduled the times of departure, created meeting points, and worked out other logistical details.

Figure 9.6: Children on a Chaperoned Walking School Bus



Image Source: www.flickr.com

The Smith Elementary WSB is a single-route program that takes place weekly on Wednesday mornings. The bus departs from a designated walk leader's house with a small group of children, and picks up additional children along the designated route. Parents of participating children have the option to walk with the WSB once their children have joined.

This WSB is a successful program that has encouraged between 25 and 40 children to walk to school. To increase visibility of the programs and increase participation in the WSB, organizers have future plans to install signage along the WSB route to identify stops and schedule [8].

Parent volunteers at Natomas Park Elementary School in Sacramento, California have organized a Walking School Bus that includes five routes that operate on a schedule, with times for each designated stop. For children to participate, parents must register them to participate in the WSB. Organizers must also seek consent from parents prior to allowing students to participate in a WSB program. This ensures that parents are fully informed about the details of the WSB program, and also addresses liability concerns that the organizer may face.

Parents and volunteers from local businesses serve as assigned walk leaders. Before volunteering, WSB leaders are required to undergo a background check and complete CPR and pedestrian safety training provided by the organizers. All volunteers must wear reflective vests and carry first aid kits during the walk. To recognize the walkers the parent leaders track the miles walked throughout the school year and reward the walkers with t-shirts and certificates at an assembly at the end of the year. Over 50 school children participate in the Natomas Park Elementary School WSB.

Route Mapping

For children to be able to walk to school, safe and comfortable routes must be identified by both the parents and the students. The City of Rochester School District is taking the lead and has offered tools to their students so they can, with their parents, determine the safest route for that child to actively commute to school.

For almost 20 years, the City of Rochester School District has been successfully providing information – in the form of walking and bicycling route maps – that enable children and their parents to identify and plan their walking and bicycling route. In a pamphlet sent home with children in grades K-6, the school district provides maps that identify general walking or bicycling routes to school; these maps encompass a 1.5 mile radius around each school. Additionally the route maps identify the street network and road intersections where crossing guards are available. Maps are formatted so that parents and their children can collaborate to identify –then color in– the best route for their family to take to school. Each year the School Traffic Safety Committee undertakes the task of updating the maps where necessary; but does not completely redraw each map. In the nearly 20 years the school district has been providing this information, there have been no accidents involving children walking to school [9].



Safety Measures

Protecting children en route to school, after school, or during their leisure activities is a top priority of all communities, and has been implemented in many creative ways. For any safety program to be effective, communities and schools must work together towards providing a safer environment for children. Discussed here are examples of programs in place all over the world that offer tools for creating a safe and friendly environment for children.

McGruff Neighborhood Initiative

The McGruff Neighborhood Initiative is a program run through the National Crime Prevention Council, a nonprofit organization, which works to increase children's safety, both at school and within the community. This initiative is a three part program that consists of the McGruff Club, McGruff Trucks, and McGruff Houses all of which engage both the children and the community.

The McGruff Club educates students in grades 1-5 in either a classroom or afterschool setting for 30-45 minutes a week. Adults who sponsor this program receive materials they need to facilitate activities and projects with students, for free, from the National Crime Prevention Council. The program focuses on building relationships with law enforcement, so it is recommended that they play an active role in the McGruff Club. The program teaches children four main topics on safety; safe and unsafe neighborhoods, conflict management, bullying, and dangerous situations in the neighborhood. In addition to those topics children are taught how to use McGruff Houses and McGruff Trucks when they need assistance in the community. [10]

McGruff Trucks are utility or city vehicles with an identifiable logo that children can flag down when they need help. The driver is trained to assist the children by calling for help. McGruff Truck participants can be from public or government regulated utility company and must have access to a two way radio.

McGruff Houses (private residences) provide a safety network in the community for children who need assistance. Children are taught to go to specially marked McGruff Houses with a distinct logo if they feel threatened. Volunteers for this program must undergo a background check to ensure the child's safety. Volunteer's duties include calling the child's parents or appropriate authorities if a child is in need. The volunteers are not obligated to enforce laws or supervise the neighborhood.

Lino Lakes, Minnesota is a participant in the McGruff House program as part of a community crime prevention measure. A Lino Lakes police officer, from the Crime Prevention Unit, oversees this program through running background checks on McGruff House applicants.

Figure 9.7: National Crime Prevention Association Logo



Logo Source: www.mcgruff.org/

Take 25 Campaign

Take 25 Campaign is a program of the National Center for Missing and Exploited Children, a nonprofit organization. The campaign focuses on prevention through providing awareness about child safety. The campaign offers guidelines for discussions and activity ideas for parents and educators (available in a classroom format). The topics cover ways for children to be safe while at home, on the internet, on their way to school, and while they are out and about.

This campaign outlines a way for children to be educated on safety practices in a positive manner that will build their confidence. It is important not to scare children, but to reassure them. Take 25 Campaign hosts events around the country, offering tips and resources to parents throughout the year. Parents can become involved by organizing an event in their community to educate other parents about child safety.

Child Pedestrian License

Stuttgart, Germany developed a children's pedestrian safety program that is implemented at all city schools. All first year students are required to go through a pedestrian safety course which is a part of the school's curriculum. The lessons are taught by a uniformed police officer from the Traffic Safety Education department. The lessons include exercises on ways to get to school and practicing of dangerous situations in the road. At the end of training students are awarded a pedestrian license and receive a gift for participating. Funding for this program is provided through the City for Children committee.

The significance of this program is to teach children at an early age pedestrian safety. Awarding children with a pedestrian license provides them with the education and experience they need to help prevent accidents from happening.

Bicycle Rider's License

The bicycle rider's license is a program that is offered to all fourth graders at schools within the City of Stuttgart, Germany. The program is taught by uniformed police officers from the Traffic Safety Education Department and takes place at youth traffic safety education sites located throughout the city. The traffic schools offer a simulated roadway where students can practice exercises in safe area. Students are taught the rules of the road and the practice of bicycle safety. Upon graduation students are awarded a bicycle rider license and a pennant certifying their accomplishments.

Safe Places

It is important that children have a safe place to go when they are in trouble, hurt, or need assistance from an adult. In 2004 the City of Stuttgart and a community based organization, Friends for a Safe and Clean Stuttgart initiated a child safety program called Action Fairy Godmother. Retailers, merchants, and social institutions place a sign in their door or window to announce their participation in the program. The goals of this program are to provide children with a sense of safety in addition to creating a sense of belonging within the community[11].

Figure 9.8: Children's Bicycle Safety Course in Stuttgart



Logo Source: Kid Corridors



Physical Infrastructure Examples

Municipalities in the United States are planning and developing their transportation infrastructure around schools, neighborhoods, and active living. The federal Safe Routes to School program (SRTS) emphasizes improving physical infrastructure to promote active commuting around school zones; improvement of the built environment is a crucial way to encourage children to walk and bicycle to school. The following examples, drawn from Champaign-Urbana, Illinois; Buffalo, New York; Alexandria, Virginia; Chapel Hill, North Carolina; and Stuttgart, Germany represent places in the U.S and Europe that have succeeded in promoting walking and bicycling through physical infrastructure projects.

Signage

In 2007, after years of campaigning, Urbana, Illinois received \$85,000 in Safe Routes to School funding for infrastructure improvements from the federal government [12].

The main goal of this federal grant was to install new signage around seven elementary and middle schools in the City of Urbana since the existing conditions in many school areas did not meet federal guidelines of school zone signage requirements. Additionally, automobile accidents were reported to be a major problem around schools zones in the City [13]. The new signs installed were colored yellow-green to increased drivers visibility of these signs and increase awareness of the surroundings [12].

Intersection Improvements

One of the key infrastructure improvements in most SRTS programs is to improve intersections, not just for cars, but for pedestrians as well. Champaign-Urbana is an example of a city that repainted all existing crosswalks, and added crosswalks to intersections within the vicinity of school zones with their SRTS grant.

Residents of Buffalo, New York worked together with the city, through workshops, to develop an infrastructure plan that would improve both cross walks, and visibility at important intersections in school zones near the city's Hamlin Park School. As part of this plan, the City of Buffalo will utilize their \$550,000 SRTS grant, and add an additional \$494,000 to improve intersections near the Hamlin Park School [14].

The City of Alexandria, Virginia developed the Bicycle Mobility Plan in 2008 to improve the cities' infrastructure for pedestrian and bicycle safety along with efforts to address Safe Routes to School. The plan called for infrastructure improvements which targeted 15 elementary and middle schools participating in the SRTS program to improve nearby intersection crossings. The city installed pedestrian countdown signals at intersections within one quarter mile of the schools to assist students.

Figure 9.9: NYS Approved School Zone Sign



Source: NYS DOT

The City of Alexandria also worked on infrastructure improvements near George Mason Elementary School. A main intersection near the school had extended crossing distance which posed a danger to students. To increase safety for students actively commuting to school, the city reduced the width of the intersection in order to shorten pedestrian crossings.

In 2004 the Town of Chapel Hill, North Carolina adopted Go! Chapel Hill, a program directed to create safer routes for children to walk and bicycle to school. The first school to participate in the program was Ephesus Road Elementary where parents and school staff worked with Go! to audit the surrounding neighborhood for safety improvements. Recommendations were made to the Town for six crosswalk improvements at the busiest intersections.

Sidewalks

Alexandria, Virginia received federal Safe Routes to School funding for safety improvement projects, which includes sidewalk construction and repair. At Charles Barrett Elementary School, 400 feet of new sidewalks were built to close a gap between main intersections near the school. For a cost of \$22,420, students now have a completed sidewalk network creating safer routes to school. (Partnership, 2008)

Bicycle Parking

In addition to sidewalks and crosswalks the City of Alexandria, Virginia has plans to construct bicycle racks at 13 of the district schools. To date \$36,400 has been budgeted for constructing bicycle parking racks. (Partnership 2008)

In 2002, Marin County, California installed bicycle lanes on North San Pedro Road between highway 101 and Civic Center Drive in the City of Rafael. In 2005, The Civic Center Improvement Fund installed showers for county workers that bicycle or walk to work to shower, clean up, and change into work clothes[15].

In addition, Marin County also installed “Share the road” signs and stencils in many locations in the City of Rafael. Installations are focused on main transportation roads and routes that lead to recreational places. More than 1000 signs have been installed since 2001[15].

Culture of Active Commuting

The “Stuttgart 21” project is a regionally motivated high-speed rail project in Stuttgart, Germany. “Stuttgart 21” will link Stuttgart to the surrounding towns and suburbs, the airport, and other important economic institutions across Europe. “Stuttgart 21” is an innovative example of a transportation infrastructure network that promotes walkability for all the people, including school children, of Stuttgart. In the summer of 2009, the planning studio found that the culture of traveling and walking in Stuttgart, Germany is part of the daily routine. School children in Stuttgart are taught skills of bicycling and how to travel with public transit at an early age. City of Stuttgart programs and

Figure 9.10: Safety Signage Posted in California



Image Source: www.flickr.com

Improving walking and bicycling infrastructure is not just about transportation to school. Improving infrastructure for walking and bicycling is beneficial to the community as a whole, giving not only children but also adults and seniors the ability to also use walking and biking infrastructure in their community.

Financial support for programs that encourage walking or biking to school must come from multiple funding sources to build sustainable programs. A key source of funding for all Safe Routes to School initiatives is the Federal Safe Routes to School Grant, authorized under the SAFETEA-LU legislation passed by congress in 2005. (See Chapter 5 under Establishment of the Safe Routes to School Program for details.) Awards are granted by states through the Federal Department of Transportation. Under this program, each municipality must identify necessary infrastructure for improving the walking or biking routes of children in grades k – 8. Other sources of funding have been authorized by the various acts of Congress for increasing overall walk ability within communities. Communities may apply for these funds in various ways with most available through each state’s department of transportation. Each community must work with their state department of transportation to apply for these grants.

Communities who participate in the Safe Routes to School program initially receive funding through federal grants; however there are other sources and methods for communities to receive funding. Taxation is a great way for municipalities to establish a long-term, stable source of funding for ongoing programs and projects that promote walking and bicycling.

In 2004 Measure A, a transportation sales tax initiative, was passed by voters. This initiative calls for a half cent transportation sales tax increase that will provide funding for the Safe Routes to School program for the next 20 years. Eleven percent of the revenue from the half cent sales tax increase will be set aside for Safe Routes to School programs. With Measure A funding available for an on-going and stable SRTS program, Marin County can transition SRTS from a model short term program, focused on annual results, to a long term program that provides benefits to participating schools, communities and students.

The funding from Measure A will cover the costs of projects such as infrastructure improvements and the placement of trained crossing guards at designated locations. The program also utilizes funding to offer classes and opportunities to encourage more walking and biking to and from school. Measure A is operated by the Transportation Authority of Marin (TAM) which created a Citizens' Oversight Committee to oversee transportation projects. The committee requires and reviews annual audits from TAM to ensure that funds from Measure A are spent accordingly.

User Impact Fees

User impact fees[†] are a source of funding that can be implemented to offset the cost of physical improvements, or services, made necessary because of heavy, industrial usage. By imposing impact fees such necessities for walking or bicycling safely to school can be provided at no additional cost to the community.

Until recently, the community of Colwood, British Columbia, Canada had received funding from user impact fees assessed on industrial sites located in the community. Lehigh Gravel Pit and Royal Bay Developers, because of the amount of traffic produced by these two activities, paid the city \$25,000 to cover the cost of providing four crossing guards on streets they heavily used [17].

However, a change in land use removed this source of funding when the gravel pit ceased to operate, creating a budget gap. To combat these shortfalls members of the community were recruited to be trained volunteer crossing guards. This, combined with smaller donations from local businesses, supplemented the crossing guard program until 2012 [18].

Fines

Some communities are using fines levied for traffic infractions in school zones to help offset the cost of paying for a Safe Routes to School program. Denver, Colorado is utilizing a portion of those traffic fines to help offset the cost of implementing a SRTS program, and to pay for an education coordinator to oversee SRTS efforts [19].

Other Sources of Federal Funding

The National Center for Safe Routes to School has identified other federal sources of funding that are available to communities to bolster their SRTS funding. Those funding streams include Transportation Enhancements, Congestion and Air Quality Mitigation Improvements, Highway Safety Improvement Program, Title 23, Section 402 Funds, and the Recreation and Trails Programs. Additionally the Center for Disease Control and Prevention, and the Environmental Protection Agency offer grants that can be used along with Federal and State SRTS funding to increase the pedestrian friendliness of a community.

[†] User impact fees are fees levied on a project developer to offset the cost of infrastructure or service improvements because of excessive use of public infrastructure such as roads.



Under Transportation Enhancement funding communities are eligible for federal funding to build pedestrian and bicycle facilities, provide pedestrian and bicycle education, and convert former railways into trails. This funding can be applied for through each state's Department of Transportation [20].

The Congestion and Air Quality Mitigation Improvements Program, authorized initially under the Intermodal Surface Transportation Efficiency Act (ISTEA) legislation, in keeping with the intention of the clean air act, provides funding for alternative transportation necessities such as bicycle storage and provides funding for media campaigns to encourage pedestrian and bicycle activity[21].

Public Policies, Plans, and Regulations

Without public policies, plans, and regulations the implementation of any active commuting initiative is impossible; recognized community support is the lifeline of these types of programs. Public policy "can be generally defined as a system of laws, regulatory measures, courses of action, and funding priorities concerning a given topic promulgated by a governmental entity or its representatives" [22]. Encouraging walking to school is addressed in existing public policy in many places, including New York. Discussed below are a few examples of education laws, city policies and proclamations that have helped institute a culture that embraces walking and bicycling to school.

Legislation and Policies

New York State

Public policy already exists within New York State Education Laws regarding the creation and supporting efforts to facilitate children walking to school. Title I, Article 17 Section 806 of the New York State Education law prescribes that "The regents of The University of the State of New York shall prescribe courses of instruction in highway safety and traffic regulation which shall include bicycle safety, to be maintained and followed in all the schools of the state"[23].

State of Maine

The State of Maine adopted the Bicycle Safety Education Act in 1999 which is a comprehensive statute that focuses on safety education and reinforcement to prevent youth accidents. This law directs the Department of Education to work with the Bicycle Coalition of Maine (BCM) to incorporate bicycle safety education into school curricula statewide. BCM trains volunteers who become certified instructors to teach bicycle safety to students in grades k-8. The program allows for certified instructors to spend one day at each school to conduct a 45 minute classroom presentation. BCM has over 75 trained Bicycle Safety Instructors who volunteer their time to advocate the importance of bicycle safety for youth.

Rochester, New York

The City of Rochester, New York takes into consideration the routes that children must take to walk or bike to school. This consideration for walking paths is addressed by partnerships among several public agencies. Multiple municipal departments are represented on the School Traffic Safety Committee. These include: the planning department, the school board, and the police department. The School Traffic Safety Board makes recommendations and offers assistance to contractors and engineers who work on construction projects to make those projects pedestrian friendly. While the construction is ongoing, it is recommended that the contractors follow the National Manual on Uniform Traffic Safety Devices, a guide published by the Federal Highway Administration.

Denver, Colorado

In 2007 the Denver City Council adopted a resolution to form a Safe Routes to School Coalition, whose purview was to develop the “Denver Safe Routes to School Strategic Plan”. Proclamation 15 Series 2007, the official resolution adopted by the city council, found that there was sufficient support for the establishment of a safe routes coalition to combine the interest of several local groups and plans[24].

Plans to Promote Active Living

While a step in the right direction, it is not enough to only add a few components of the Safe Routes to School program. To be most successful it is necessary for a community to adopt a complete Safe Routes to School Plan that addresses the important topics of information, public policy, education, encouragement, infrastructure and finances. Discussed here is a small selection of complete SRTS plans that have been adopted by Denver, Colorado; Santa Clarita, California; Marshfield, Wisconsin; and Marin County, California.

Santa Clarita, California

The City of Santa Clarita, California adopted a Safe Routes to School plan in 2007 which includes curriculum components to educate and encourage children to walk to school. This plan was implemented in conjunction with a Non-Motorized Transportation Plan, which is aimed at creating a community where walking and biking is a practical and safe mode of travel for everyone. The plan integrates the Safe Routes to School program through the promotion of walking and biking as a safe and healthy alternative for children to commute to school.



Santa Clarita's Safe Routes to School program (SRTS) has had continued success with a high number of participating schools throughout the community. Since 2007, the community has received over \$1.5 million in Safe Routes to School funding [25]. The city, schools, and the community have worked together to produce their own version of the Safe Route to School plan based on the "Five E's". The Santa Clarita plan however only acknowledges the first four "E's" Engineering, Enforcement, Education, and Encouragement. With a focus on education and encouragement, the plan outlines successful programs that are already in place along with additional recommendations for the future of the program:

- Created a stakeholder team made up of students, teachers, parents, school officials, and neighbors to take charge in organizing the Safe Routes to School programs.
- The Safe Routes to School Stakeholder team works with the city to develop improvement recommendations.
- Schools organize ongoing activities to promote and encourage walking and biking to school on a regular basis. Activities include the Walking School Bus, Mileage Clubs and Walk and Roll to School Days. Activities are held throughout the year to regularly promote active commuting to school. (See "Programs," earlier in the chapter, for further explanation of these programs.)
- The City is responsible for hiring and training adult crossing guards to work in high traffic intersections to create a safer environment for children commuting to school. The salaries of crossing guards are paid for by the school districts.
- The City developed "Suggested Routes to School Maps" that are available on the City of Santa Clarita website and are updated annually to provide the most up-to-date maps.
- The Santa Clarita SRTS Task Force recommended that there be a paid Safe Routes to School Coordinator who is responsible for seeking funding for educational and encouragement programs.
- The task force recommended that funding be sought through other sources than state or capital funding. Alternative strategies for funding suggested going to foundations, corporations, businesses, individuals, or holding special events.

The City of Santa Clarita, a suburban community with a successful SRTS program, provides for an ideal model in developing a Safe Routes to School plan for the Town of Amherst. By 2012 the City of Santa Clarita plans to have 100% of its elementary schools participating in the SRTS program and with continued work that goal can be attainable. The implementation of the Non Motorized Transportation Plan also bolstered SRTS efforts.

Marshfield, Wisconsin

The City of Marshfield received a grant from the Wisconsin Department of Transportation in 2007, and using that, various interested groups including local schools, the city government, and parents were invited to become the Marshfield SRTS Plan Task Force. The main goal of this task force was to develop safe routes to school for students. The Task Force held several meetings to review existing conditions and policies, to identify community needs and priorities, to explore existing trends and accomplish common goals. The end result was the Marshfield SRTS Plan; a plan to make safer pedestrian and bicycle routes to the city's schools.

Marshfield's safe routes to school plan called for people to be educated on the topic of safe pedestrian and biking routes. Based on the concern that most children ride their bikes improperly, it was important to make students more safety conscious especially when crossing at intersections. Specifically, children needed to be trained to look both ways before crossing, to cross at intersections appropriately, and to make use of the crossing guards. It was important to educate the parents about the benefits of walking with their children to school and to teach their kids about safety. In one demonstration activity, local police departments were invited into the schools to talk with teachers, parents and students about safety issues such as never walking alone and stranger danger. In addition, the local police taught personal safety skills to students and parents, and helped students identify safe routes areas city-wide for both pedestrians and bicyclists. The safe routes to school educational plan also focused on the importance of drivers being aware of walkers, bikers, school zones, and new speed limits. Finally, the Task Force's educational plan calls for city officials to identify and enforce policies that promote bicycling and walking. For example, one Wisconsin law requires all motor vehicles to reduce their speed to 15 mph in school zones and near school crossing; drivers that fail to comply are subject to fines.

In order to encourage and promote the Safe Routes to School plan to the community at large, Marshfield's Plan recommends a concerted media campaign. Marshfield's media campaign plan included posters, emails, newsletters, and newspapers articles. To promote the perception of safety, it was recommended to improve facilities for students by completing networks of sidewalks around schools and neighborhoods. In addition, the plan suggests parents or volunteers walk with students for any needed assistance. The plan also encourages planners to have walking-promotion programs such as walk-a-thons or mileage clubs [26].

Although the population of the City of Marshfield is significantly less than the Town of Amherst's, the two municipalities are similar in other ways. Marshfield, Wisconsin has a population of approximately 18,646 people, compared to Amherst's population of 116,510 [27]. The Marshfield School District serves approximately 4,000 students from 10 surrounding communities. Marshfield and Amherst also have similar climate characteristics; Marshfield's average winter temperature high is 24 and low 6 degrees; Amherst is high temperature is 31 and low is 18 degrees[28]. The average household income is \$37, 248 in Marshfield where as Amherst's is \$55,427 [27].



Denver, Colorado

Denver, Colorado the “Mile High City” has a history of encouraging students to walk or ride their bikes to school. As of the fiscal year 2009, 25 public schools have received funding under the Safe Routes to School program totaling over \$681,000[29]. This has resulted in Denver creating a complete plan for the implementation of “Safe Routes to School” which encompasses the five “E’s”.

Denver’s plan began in 2007 with a proclamation by the city council to establish a Safe Routes to School Coalition; a year later the SRTS Coalition produced a strategic Safe Routes to School Plan that was formally adopted in November 2008. To develop that plan, the coalition brought together seventy five potential stakeholders such as the Denver Police Department, the Denver Fire Department, the City Council, Board of Education Commission, parents, neighbors and various nonprofit organizations.

All of the recommendations suggested by the Safe Routes to School Coalition are modeled on the five “E’s” identified in the National Safe Routes to School program and are prioritized by 1st year (immediate action) recommendations, 2-5 year and 5 – 10 year (long term) recommendations for implementation. Some of the more notable recommendations given by the coalition are:

- To create a coordinator position to organize educational and programmatic activities; hiring this position was given an immediate priority.
- Fines levied for traffic infractions in a school zone would be utilized to create a stable funding source for the Safe Routes to School Program.
- Establishment of an incentive program to reward schools for participating in SRTS
- Recommend that the hired coordinator track the progress, and identify the most effective models and practices used in the Denver program.
- Develop a program to encourage community participation in safe routes to school mapping
- Establish a training program for educators, and a best practices and tools website

While not identical to the City of Denver, the Town of Amherst does have some similar characteristics to Denver. Denver’s population of 1,800,000 is substantially larger however characteristics of winter climate and income statistics are similar. Sample climate data for the month of January indicates temperatures ranging from 16 degrees to 43 degrees (Fahrenheit) which is only slightly warmer than Buffalo’s 18-31 degree range [30]. The median family income of Denver (\$54,798) is similar to family incomes in Amherst [31].

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Encouraging more students in the Williamsville Central School District to walk and bike to school is a complex task. It requires systemic change from a number of stakeholders including the students, the parents, the school district, the town government, and the community. Without the involvement of each of these stakeholders, change in children's commuting behavior becomes a difficult task.

To promote active commuting behavior among children in the WCSD, change must occur in three key areas, policy change, programmatic change, and changes to physical infrastructure, changes that we label as the "3P's." Policy changes involve creating or revising town and school district policies that would make it easier for more students to walk and bike to school. Physical improvements – such as sidewalk provision and improvements - are necessary so that more students can reach their respective schools in a manner that is safe, comfortable, and enjoyable. Programs to educate and encourage students in the WCSD to walk and bicycle to school, as well as to encourage other stakeholders to support such commuting behavior among students is essential for this initiative to be successful.

It is not possible for the above recommendations to be implemented simultaneously. In recognition of this, the studio team has classified its recommendations in two phases: immediate (for the 2010-2011 school year); and for 2011-beyond. Immediate recommendations include actions that can offer 'quick wins,' and can keep the momentum of this project going. These actions should be implemented by the start of, or during, the 2010-2011 school year. Recommendations for the "2011-2012 school year and beyond" build on the success of the immediate recommendations, and include actions that can lead to larger-scale behavioral change in the community. To be successful in the face of changing circumstances, plans – such as Kid Corridors - must be continually evaluated and updated. We recommend doing so on an annual basis.

Below we list key recommendations to facilitate and support active commuting behavior in the WCSD planning area. The recommendations pertain to the following areas: policy, programs, and physical infrastructure. The lead agency responsible for implementing a particular recommendation is identified in *italics* next to each recommendation. Policy, programmatic and physical recommendations are summarized in Tables 10.1, 10.2, and 10.3. Details of these recommendations follow the tables.



Policy Recommendations - Town of Amherst

Recommendation 1 - Create a Kid Corridors Committee (Youth Board, Town of Amherst)

This plan recommends, as its first priority, the creation of a Kid Corridors Committee, as a subcommittee of the Amherst Youth Board. The Kid Corridors committee will guide the implementation of the following recommendations. The committee is to be comprised of active commuting stakeholders, including parents, students, town and school district representatives, non-profit organizations and local business owners. This committee should meet regularly to review and develop active commuting policies, programs and funding opportunities, and work with the appropriate entities to ensure implementation. A Kid Corridors committee member should be designated to participate in all other stakeholder activities, such as the Youth Board and PTSA meetings, to ensure connectivity and open lines of communication. The committee's goal is to promote active commuting for youth and will work to ensure active commuting for youth remains a priority in the WCSD.

Recommendation 2 - Designate a Kid Corridors Zone (Town Board, Town of Amherst)

This plan recommends that the Town of Amherst must formally designate a Kid Corridors zone encompassing a 1-mile street network* around each WCSD school. Within this zone, all crosswalks are to be marked. This zone - an expansion of the traditional school zone - will be used to create and improve policies, educational programs, and physical infrastructure to promote walking and bicycling by children from home to school. This plan recommends that the Town Board pass a resolution adopting the Kid Corridors zones, and make physical improvements within the zone a priority when planning the annual capital budget. Encouraging more students to actively commute within the Kid Corridors zone will not only improve children's health but also benefit the community by reducing carbon emissions and increase cost savings from reduced use of automobiles by families (see Chapter 6 - Cost of Driving Children to Schools for Parents for more information).

* A 1-mile street network is a network radius which represents the actual distance of the walking commute. This distance was adopted based on national best practices of a convenient distance to actively commute to school.

Recommendation 3 - Increase Enforcement of Traffic Laws and Imposition of Fines in Kids Corridor Zones (Police Department)

Stepping up the enforcement of existing traffic laws – including imposition of fines – in the Town of Amherst will minimize safety concerns for children walking and bicycling to school. The plan recommends that in the short term (2010-2011 school year) the Police Department must increase the enforcement of traffic laws (such as pedestrians having the right of way in a crosswalk) in all school zones in the WCSD. The plan recommends that the Town must increase the enforcement of sidewalk clearance laws (and explore the increase) in fines for residents who do not clear their sidewalks.

In the long term, the plan recommends that there must be a heightened enforcement of traffic laws (and accompanying fines) by the Town and Police Department along all routes to school within the larger Kid Corridors zone of a 1-mile radius around each school in the WCSD. The Police Department should consider the use of portable and fixed speed cameras at high risk intersections (as shown in Figure 4.15: Density of Bike/Ped Crashes with Motor Vehicles) within the Kid Corridor Zones.



Policy Recommendations – Williamsville Central School District

Recommendation 4 – Review Bussing Policies (WCSD)

The plan proposes that the Williamsville Central School District conduct a review of its bussing policy in consultation with the proposed Kid Corridor Committee. Under current policy, 100% of students in the Williamsville Central School District are eligible for bus service. This plan shows that a significant portion of families that live within a 1-mile radius from WCSD schools do not use a school bus, and instead rely on personal automobiles. The 1-mile radial distance is a convenient distance for children to commute actively, and doing so will allow children to meet their recommended daily level of physical activity. As this plan is implemented (and more students begin walking and biking to school), offering 100% of students a bus service may no longer be necessary and reduction in this service will likely result in cost savings for the School District.

Recommendation 5 – Explore and Develop an Anti-Idling Policy for Vehicles and Busses (WCSD)

Vehicle idling in school zones is not only a waste of natural resources but it also pollutes the air that school children breathe. The development of an anti-idling policy during pick-up and drop-off around schools shows a firm commitment to the health of students and our environment. The creation of such an anti-idling policy offers support for families who walk (rather than drive or bus) their children to school. The plan proposes that the WCSD explore best practices on anti-idling policies in cold weather climates and develop appropriate anti-idling policy for WCSD school premises.

Program Recommendations - Town of Amherst**Recommendation 6 - Establish a Safe Places Program
(Kids Corridor Committee, Youth Department and Police Department)**

Ensuring safety of children while walking and bicycling to schools is a key concern for WCSD parents. A well-established safe places program will provide children walking/bicycling to school with access to a network of safe locations – such as businesses, schools, homes - within their neighborhoods, building trust and community involvement. This plan recommends that the Kid Corridors Committee work with residents, local businesses, schools, and the Amherst Police Department to develop criteria for identifying locations for safe places for children actively commuting to school. Once these locations are identified, a safe places program should be established in all Kid Corridors Zones.

Recommendation 7 - Create a Kid Corridors Hotline for Unsafe Walking and Bicycling Conditions (Town Board)

This plan proposes that the Town Board authorize the creation of a Kid Corridors Hotline as a tool for children and their parents to report lack of sidewalk maintenance along school routes. For example, children and their parents can use the hotline to report inadequate snow removal during winter seasons. This will ensure that all sidewalks within the Town are free of obstruction creating a safer environment for all pedestrians, including school children.



Program Recommendations - Williamsville Central School District

Recommendation 8 - Create Incentives for Students to Walk and Bicycle to School (WCSD and WCSD Schools)

The Williamsville Central School District can take the lead in encouraging students to actively commute to school by hosting and participating in events that promote walking and bicycling.

- We recommend that WCSD actively participate in the International Walk to School Day, held annually in October. Organizing such a day provides an opportunity at the beginning of the school year to introduce to students the benefits of active commuting.
- To encourage active commuting behavior among children, we recommend that the WCSD direct each school to establish a Mileage Club (see Chapter 9 for detail) by 2010-2011 to track and reward children who walk or bicycle to school. Winners can be recognized at a school-wide assembly.

Recommendation 9 - Distribute Kid Corridors Active Commuting Maps to K-8 Students (WCSD and WCSD schools)

We recommend that the WCSD distribute hard copies of the Kid Corridors Active Commuting Maps (provided in Appendix H) to each K-8 student in the school district at the beginning of 2010-2011 school year (and beyond). These maps serve to educate students in each of the ten WCSD elementary and middle schools about the most appropriate walking/bicycling route to school. In the long term, the Kid Corridors Active Commuting Maps should be routinely updated and available on an interactive website for parents to determine the appropriate travel routes to school for their children.

Recommendation 10 - Educate Students on Active Commuting (WCSD and WCSD schools)

The State of New York requires all schools to teach children about highway safety and traffic regulations (see Chapter 5 - Legal Framework, New York State Education Law). The WCSD should ensure that each school within the District offers pedestrian and bicycle safety training to students. We recommend that WCSD implement the educational curriculum provided in conjunction with this report (found in Appendix I). The curriculum is designed to educate children in grades K-8 about traffic safety. Implementing this measure will ensure that a standardized curriculum is being taught to all students within the District.

Program Recommendations - Parent Teacher Student Association (PTSA)**Recommendation 11 - Develop and Launch a Walking School Bus (PTSA and Kids Corridor Committee)**

A Walking School Bus program establishes a system wherein students walk to school in a group led by parent volunteers (see Chapter 9 - Best Practices, Programs). A Walking School Bus is favored by children because it allows them to walk with their friends. A Walking School Bus is favored by parents because it eliminates their concerns about lack of safety. We recommend that the Kid Corridors Committee work with the PTSA in the WCSD to create guidelines for such a walking program, as well as prepare informational packet for volunteer walk leaders. PTSAs should help identify designated routes for a Walking School Bus program, along with designated stops and schedules, for interested students and parents. PTSA should also disseminate pertinent information.

Recommendation 12 - Create Awareness of Community Walking and Bicycling Safety (Kids Corridor Committee, WCSD, and PTSA)

Increasing drivers' awareness about pedestrian and bicycle safety can help reduce pedestrian accidents and injuries. We recommend that the Kid Corridors Committee develop and launch a Kid Corridors media campaign to educate the Amherst Community about the importance of pedestrian/bicyclist safety. Existing social media networks such as facebook and twitter can be used to announce events in the community. Along with using local media networks, the Committee could publish and distribute a quarterly newsletter to all Town of Amherst residents educating the community about public safety practices that ensure safety of children walking and bicycling to school. This newsletter should be posted on the WCSD and Town websites.



Physical Recommendations - Town of Amherst

Recommendation 13 - Signage for Kid Corridors Zones (Engineering Department)

We recommend that Engineering Department install informational signage to inform drivers (and other people) that they are entering a Kid Corridors Zone. This signage should clearly encourage drivers to slow down and be aware of students walking and bicycling in the area. Signage should also be installed along Walking School Bus routes so drivers are aware that large groups of students are likely to cross particular intersection enhancing the safety of participating students.

Recommendation 14 - Create Aesthetically Pleasing Kid Corridors (Engineering Department)

Aesthetically pleasing routes and destinations make children's walk to school enjoyable. Children's aesthetic preferences are distinct from those of adults (see Chapter 2 - Stakeholders). Children are interested in vivid colors, nature, and interactive play experiences. These attributes should be incorporated by developing innovative designs – such as animal tracks and fossil stamps – in the sidewalks that are planned for construction through the SRTS grant. Providing destinations along the route to school also gives students more reasons to walk or bike. The Town of Amherst should consider placing bicycle parks, skate parks, or educational playgrounds within Kid Corridor Zones – and along other school routes - to encourage walking and bicycling to schools. To fund some of these improvements and adopt a Kid Corridor program, similar to the adopt a highway program, could be implemented.

Recommendation 15 - Improve Infrastructure within Kid Corridors Zones (Engineering Department)

Improving the infrastructure in all Kid Corridors zones will create a better means for students to actively commute to school. We recommend that the Engineering Department must paint all crosswalk lines and stop lines at intersections along each route and at every intersection in Kid Corridors zones to better guide students when crossing the street. In addition, the sidewalk network must be completed in all Kid Corridors zones. In the long term the Engineering Department must add additional infrastructure such as pedestrian countdown signals and increased lighting (LED) along paths, sidewalks, and streets to further improve safety.

Recommendation 16 - Build a Bicycle Training Facility (Police Department & Recreation Department)

Bicycle training facilities are intended to provide bicycle and pedestrian safety education to students in a fun and active way. Students can also learn about bicycle maintenance to ensure that they get to school safely. The bicycle training facility can be established on a temporary basis, in the parking lots with pylons, at each school by the Police Department during the bicycle educational course. However, a permanent bicycle training facility would be an asset to the Town of Amherst and could be shared with the other school districts. This structure should be on town owned land, would be approximately the size of a small park and could be considered an educational playground under the Recreation Department. It would mimic a neighborhood environment on a miniature scale. There would be roads, crosswalk, train tracks and possibly buildings so that students can learn how to safely navigate this environment in a controlled setting.

Recommendation 17 - Implement Walk Amherst Plan prepared by UB Studio Spring 2009 (Engineering Department)

The Walk Amherst Plan outlines recommendations for traffic calming measures (plan presented to Town in May 2009). We recommend that these traffic calming measures must be implemented in all Kid Corridors zones by the Town of Amherst.

In the short term, traffic calming measures should only be applied to new road construction in Kid Corridors zones to reduce costs of changing existing infrastructure. However, in the long term these measures must be applied to existing roadways by means of reducing crosswalk distances by installing bulb outs, medians, and bicycle lanes. For high risk intersections, roundabouts can be installed to reduce traffic speeds and provide safer crossings for pedestrians and bicyclists.



Figure 10.1: Chaperones Assisting Students on a Walking School Bus



Table 10.1: Summary of Policy Recommendations

ACTIONS	2010 - 2011 SCHOOL YEAR	2011 - 2012 SCHOOL YEAR AND BEYOND
TOWN OF AMHERST		
Create a Kid Corridors Subcommittee under the Town Youth Dept/Youth Board	Identify key stakeholders (Police Department, School Board, Health Department, PTSA, Recreation Department, School Representative) in the community and facilitate the implementation process of this plan	Review and develop Kid Corridors policies, programs, and alternative sources of funding (local business sponsorship, private funding, grants)
	Recruit and train Walking School Bus leaders	--
Define Kid Corridors Zone	Create a uniform 1-mile street network around each school for active commuting	Develop Kid Corridors Zone policy and streamline with school zone policy; indicate zone by marking all sidewalks and adding signage
Increase Enforcement and Fines	Increase enforcement of traffic laws in school zones (Police Department)	Install portable and fixed speed cameras in targeted areas (Police Department)
	Increase enforcement of sidewalk laws (snow removal) in school zones	Extend increased enforcement and fines into a larger Kid Corridors Zone for each school
	Increase enforcement of State crosswalk laws in school zones (Police Department)	--
SCHOOL DISTRICT		
Review Bussing Policies	--	Revise bussing policy to encourage students to actively commute within 1-mile of school
Develop an Anti-Idling Policy for Vehicles and Busses		Develop anti-idling policy for WCSD policy book
	Research NY State law and best practices	Install anti-idling signage at each school Fines for idling in school drop-off areas



Figure 10.2: Child Using Kid Corridors Maps to Navigate



Table 10.2: Summary of Program Recommendations

ACTIONS	2010 - 2011 SCHOOL YEAR	2011 - 2012 SCHOOL YEAR AND BEYOND
TOWN OF AMHERST		
Establish a Safe Places Program	Kid Corridors Committee to work with community (business owners, schools) to develop program criteria	Establish program in all Kid Corridors Zones Distribute informational materials to parents
Create a Kid Corridors Hotline for Unsafe Walking and Bicycling Conditions	Determine the best means to provide service within existing Town resources	Post information about new Kid Corridors Hotline in Amherst Bee Provide assistance to elderly/disabled for sidewalk snow removal
SCHOOL DISTRICT		
Create Incentives for Students to Walk and Bicycle to School	WCSD schools participate in International Walk to School Day	--
	Create a Mileage Club for students to track miles when they actively commute	Establish a Punch Card Program where students can receive rewards and prizes the more they actively commute
	Use Halloween as a walk to familiarize students with neighborhood	--
Provide Kid Corridors Maps to Each Student	Distribute Kid Corridors Active Commuting Maps provided in this report to each student grades K-8 Add Kid Corridors Active Commuting Maps to WCSD website	Routinely update Kid Corridors Active Commuting Maps to provide most appropriate routes to school Develop an interactive website for parents to find appropriate school travel routes for children
Educate Students on Active Commuting Safety	Conduct in school safety assemblies ("Stranger Danger") and implement Dr. Lewis' curriculum	Audit current pedestrian and bicycle safety education at schools and bring all schools up to State laws.
PARENT TEACHER STUDENT ASSOCIATION (PTSA)		
Develop and Implement a Walking School Bus	Create Walking School Bus informational packet for volunteer walk leaders	Establish designated routes, stops, and schedules for Walking School Bus
Create Awareness of Community Walking and Bicycling Safety	Hold public meeting informing parents, children and community members on public safety measures	Create a Kid Corridors Campaign through media networks Distribute a quarterly newsletter to all Town residents



Figure 10.3: Kid Corridor Signage Directing Students on Their Route to School



Table 10.3: Summary of Physical Recommendations

ACTIONS	2010 - 2011 SCHOOL YEAR	2011 - 2012 SCHOOL YEAR AND BEYOND
TOWN OF AMHERST		
Labeling of Kid Corridors Zones	Install informational signage along routes in Kid Corridors Zones (Engineering Department)	Install walking school bus signage at crosswalks along route
Create Aesthetically Pleasing Kid Corridors Zones	Decorate sidewalks in Kid Corridors Zones with concrete stamps (animal tracks, fossil stamps) that are attractive to youth (Engineering Department)	Create more youth destinations along Kid Corridors (Educational Playgrounds, bike/skate parks) (Recreation Department)
Improve Infrastructure of Kid Corridors Zones	<p>Paint all crosswalks and stop lines in Kid Corridors Zones</p> <p>Identify all critical sidewalk extensions (Engineering Department)</p>	<p>Install pedestrian countdown signals at busy intersections within Kid Corridors Zones</p> <p>Complete sidewalk network within the Kid Corridors Zones</p> <p>Ensure adequate lighting (LED) along paths, sidewalks, and streets in Kid Corridors Zones</p>
Build a Bicycle Training Facility	Establish a temporary Bicycle Training Facility with a mock street course for students to practice bicycle and pedestrian safety (Recreation Department)	<p>Build a centrally located bicycle training facility that all schools could utilize</p> <p>Establish a bicycle check up clinic at the training facility to teach students proper bicycle maintenance</p>
Implement the <i>Walk Amherst Plan</i> prepared by UB Studio Spring 2009	Apply traffic calming measures to new road construction	<p>Apply traffic calming measures to existing roadways by reducing crossing distance with bulb outs, medians, and bicycle lanes</p> <p>Create roundabouts at high risk intersections</p>

Kid Corridors: Taking Steps to School

An Active Commuting Plan for the Williamsville Central School District

Appendices



University at Buffalo
Department of Urban and Regional Planning
Graduate Planning Studio Workshop
Fall 2009

List of Appendices



- Appendix A Public Meeting Materials
- Appendix B A Pocket Guide for Visioning
- Appendix C Interactive Assembly
- Appendix D Planning Approach and Methodology
- Appendix E Demographic Data
- Appendix F Legal References
- Appendix G Williamsville Central School District Attendance Areas
- Appendix H Kid Corridors Route Maps





Design Your Children's Safe Routes to School!

A University at Buffalo Urban Planning studio entitled "Kid Corridors: Taking Steps to School" is hosting a community meeting to hear the visions of a walkable, active Amherst. We are inviting parents of the **Williamsville Central School District** to come and share experiences and ideals. Join us in working with the Town of Amherst and the Williamsville Central School District to make this vision a reality!

Children grades K - 8 are welcome, too. A special concurrent session is planned just for them!

Where: Amherst Pepsi Center

When: Wednesday, September 30th

Time: 6:00 pm—7:30 pm

Refreshments will be served!

*Walk-ins welcome, but to assure a spot, RSVP to Kelly Ganczarz
by Monday, September 28th at (716) 829-2133 ext. 225.*

HEY KIDS!

What do you think would be the best neighborhood to live in?

Would it be filled with superheroes? Castles?

How would you get around? Bike? Fly? Ride a horse?

Representatives of the Department of Urban and Regional Planning in the University at Buffalo want to hear from you.

Come to a special meeting to tell us!

Where: Amherst Pepsi Center

When: Wednesday, September 30th

Time: 6:00 pm—7:30 pm

**There will
be food!**

We invite you, the students from the Williamsville Central School District, to join us in working with the school district and the town of Amherst.

After the session, you will receive a special certificate of participation!

Walk-ins are welcome, but to assure a spot, RSVP to Kelly Ganczarz by September 28th at (716) 829-2133 x 225.

Participants must be accompanied by at least one parent or guardian. Parents/guardians are invited to attend a concurrent session.



Community Meeting for
“Kid Corridors:
Taking Steps to School” parents
and children for Williamsville
Central School District
is upstairs



Kid Corridors Assembly

Wednesday, September 30, 2009

Amherst Pepsi Center, Amherst, NY

6:00 – 6:10	Welcoming Remarks
6:10 – 6:20	Large Group Discussion
6:20 – 6:40	Small Group Breakout Sessions
6:40 – 7:00	Small Group Presentations to Large Group
7:00 – 7:10	Closing Remarks

Large Group Discussion Guide

Imagine a neighborhood that empowers your children to walk and bike to school. How would you describe this neighborhood?

Small Group Breakout Discussion Guide

How does your neighborhood currently allow for physical activity?
How do you encourage your children to be physically active?

How does the neighborhood impede your children from being active?
What obstacles hinder physical activity in your household?

What motivates your children to walk or bike to school?
What prevents your children from walking or biking to school?

In two sentences, describe a safe route to school.
How can Amherst move towards this vision?

Kid Corridors: Taking Steps to School, University at Buffalo Planning Studio

Kelly Ganczarz, Jessie Hersher, Lauren Hotaling, Manon Jokaleu,
Fenna Mandolang, Beth McCalister, Jonathan McNiece, Jessica Miller,
Kailee Neuner, Derek Nichols, Danielle Rovillo, Michael Watrous

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Kid Corridors Assembly

Wednesday, September 30, 2009

Amherst Pepsi Center, Amherst, NY

6:00 – 6:10	Welcoming Remarks
6:10 – 6:20	Large Group Discussion
6:20 – 6:40	Small Group Breakout Sessions
6:40 – 7:00	Small Group Presentations to Large Group
7:00 – 7:10	Closing Remarks

Large Group Discussion Guide

Imagine a neighborhood that empowers your children to walk and bike to school. How would you describe this neighborhood?

Small Group Breakout Discussion Guide

How does your neighborhood currently allow for physical activity?
How do you encourage your children to be physically active?

How does the neighborhood impede your children from being active?
What obstacles hinder physical activity in your household?

What motivates your children to walk or bike to school?
What prevents your children from walking or biking to school?

In two sentences, describe a safe route to school.
How can Amherst move towards this vision?

Kid Corridors: Taking Steps to School, University at Buffalo Planning Studio

Kelly Ganczarz, Jessie Hersher, Lauren Hotaling, Manon Jokaleu,
Fenna Mandolang, Beth McCalister, Jonathan McNiece, Jessica Miller,
Kailee Neuner, Derek Nichols, Danielle Rovillo, Michael Watrous

amherstwalkability@gmail.com

K-4 Tentative Schedule

15 Minutes Check In

Collect art projects
Students create nametags
Divide children into groups by age/grade

10 Minutes Introduction

Facilitator 1 will take on a teacher role.
Facilitator 2 will be a superhero.

Facilitator 2 will present his superhero route to school. It will be as creative and crazy as possible to show the kids that they have no limits to their projects as well.

Facilitator 1 will instruct the kids on the object of the activity- they are to draw what they would see, or the activities they would partake in on their way to school in their perfect world.

15 Minutes Individual Map Activity

The children will then take the time to construct with all the different supplies that will be offered to them.

5 Minutes spent discussing Individual Map Activity

We will ask for the children to show/verbalize some of what they have created.

15 Minutes Group Map Activity

After the brief discussion on individual projects, we will ask the students to add their most favorite aspect of their own maps to a giant group map.

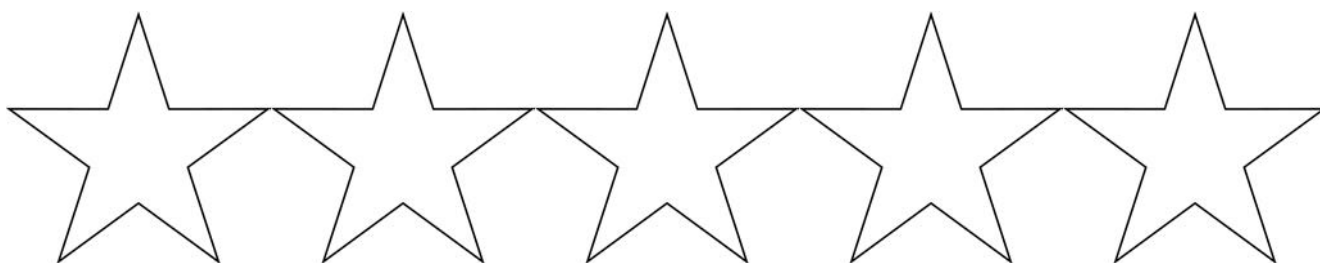
Reception

5th – 8th Grade Visioning Session

1. Sign In
2. Individual Task: Draw a path from home to school – this is not your real path but a vision of what the perfect path would be. What would be on the path? What would you see on the path? How would you travel from home to school? Please be thoughtful and creative, this can be based in fantasy or reality. This is all about what you want...
3. Talk with the group about what they created.
4. Create one large map of a path to school (or multiple paths to multiple schools) by letting each student add their favorite element of their map to the large map.

Name _____

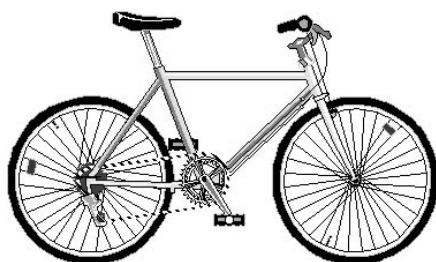
How much do you like going to school? Five colored stars mean you like school very much. One colored star means you like it just a little bit.



Please circle the picture below that shows the way you usually get to school.



School Bus



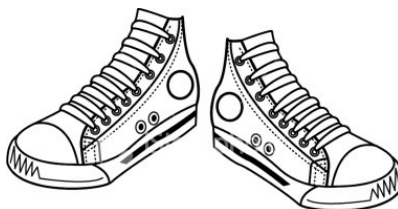
Bicycle



Car



Scooter



Walking

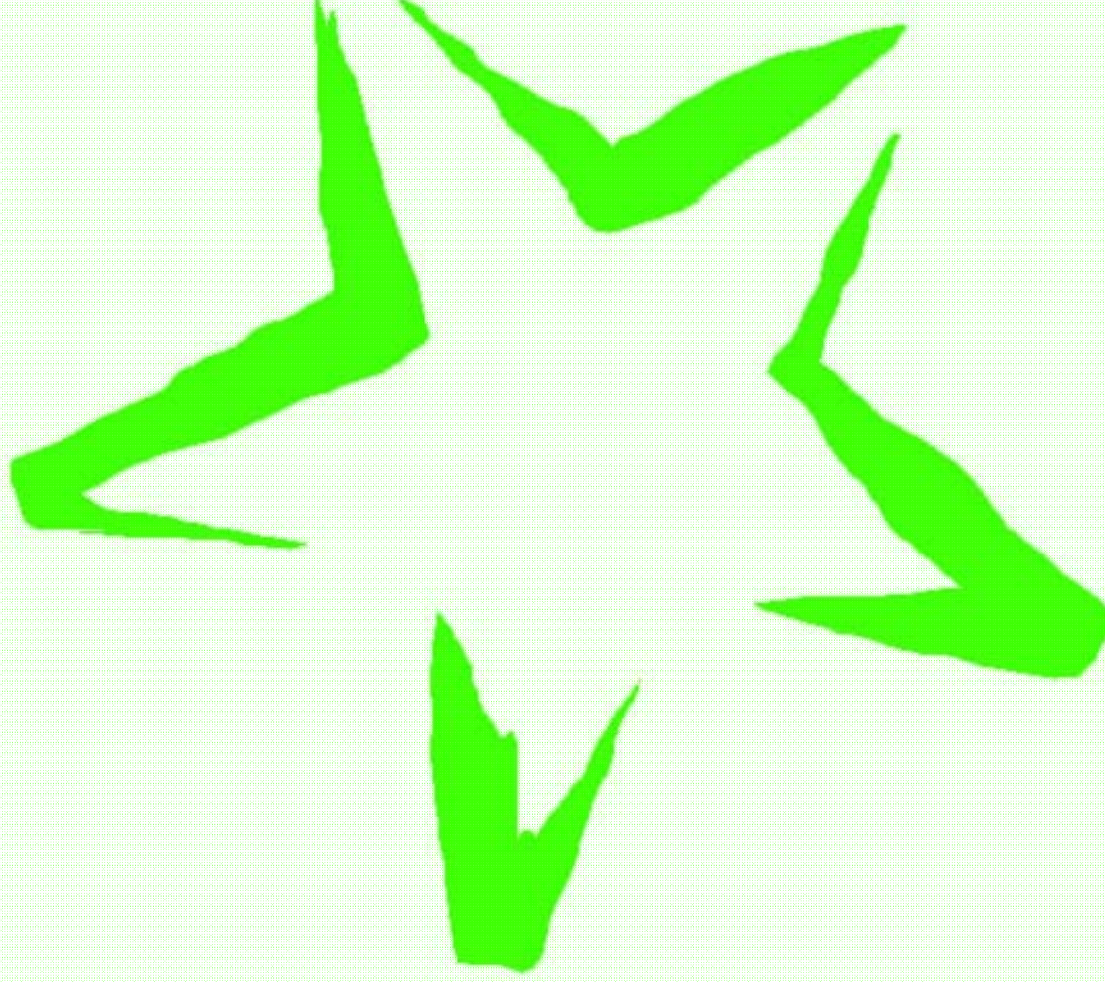


Rollerblades

Certificate of Participation

This certificate is awarded to

*in recognition of valuable contributions to the
Kid Corridors: Taking Steps
to School Project*



Signature

Date

Signature

Date

Want to Stay Involved?

**If you, or someone you know,
would like to participate in further
programs for this project e-mail:**

amherstwalkability@gmail.com

**Please include the following
information:**

- your name
- child's name
- child's age
- grade level
- child's school
- home address or nearest intersection
- and if you had participated in the assembly held on September 30th.

Thank You For Your Continued Support!

Want to Stay Involved?

**If you, or someone you know,
would like to participate in further
programs for this project e-mail:**

amherstwalkability@gmail.com

**Please include the following
information:**

- your name
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**Please include the following
information:**

- your name
- child's name
- child's age
- grade level
- child's school
- home address or nearest intersection
- and if you had participated in the assembly held on September 30th.

Thank You For Your Continued Support!

You are cordially invited to a
University at Buffalo
Department of Urban and Regional Planning
Studio Presentation

Kid Corridors: Taking Steps to School

An Active Commuting Plan for the Williamsville Central School District



Studies show that regular physical activity improves the physical and emotional health of children as well as their academic achievement. In the past, many children engaged in regular physical activity when walking or bicycling to school. In the last several decades, however, the numbers of children walking and bicycling to school has declined dramatically.

Kid Corridors: Taking Steps to School, a plan prepared by UB graduate students, addresses the opportunities and barriers impacting a child's decision to walk and bike to school in the Williamsville Central School District in the Town of Amherst. It offers recommendations to the Town of Amherst and Williamsville Central School District to educate, encourage, and enable children to walk to school.

Kid Corridors is the product of a semester long studio project commissioned by the Town of Amherst to develop materials to complement a Safe Routes to School Program Grant awarded to the Town. You are invited to attend a presentation to learn more about Kid Corridors and provide feedback on recommendations developed by the students.

**Please join us
Thursday December 17, 2009
6:00-8:00 PM
Amherst Town Hall
Council Chambers
5583 Main Street
Amherst, NY 14221**

Presented By:

Kelly Ganczarz
Jessie Hersher
Lauren Hotaling
Manon Jokaleu
Fenna Mandolang
Beth McCalister

Jonathan McNeice
Jessica Miller
Kailee Neuner
Derek Nichols
Danielle Rovillo
Michael Watrous

For more information contact :

Dr. Samina Raja (716) 829-2133 ext 225

Appendix B

A Pocket Guide for Visioning





Visioning for Active Commuting for School Districts

**A Step by Step Guide for Creating
Healthy Environments for Youth**



Introduction to Step by Step Visioning:

Creating a plan for active commuting in your school district will require a community meeting or a visioning session. This activity is a new form of consensus building that allows members of a community to share their thoughts and values about the future of their neighborhood (1). Visioning is an integral part of planning today. It invites citizens to share their thoughts and values in the decision making process. By going through a visioning process, a community can better understand the values of its citizens, identify trends and forces affecting the community, articulate big-picture views to guide short-term decisions and long-term initiatives, and develop tools to achieve its vision (3). The community's input and recommendations are strategically used by planners to avoid autocratic planning.

"Development of a community vision is the process of bringing together all sectors of a community to identify problems, evaluate changing conditions, and build collective approaches to improve the quality of life in a community (2)."

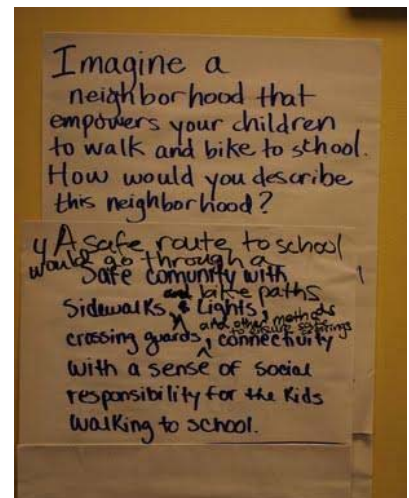
1. Get Started: Determining the Scope of the Study of Active Commuting for Children

Leaders and community members involved in the strategic visioning process must understand how the process works and limitations, as well as the commitment required to make the visioning process successful (4). Choosing the appropriate scope of the plan before holding the community meeting will establish a focused visioning session. Here are some questions that may help clarify who should be invited to a visioning session:

*Is the plan for a region, municipality, neighborhood, or a street?
Will the plan be for business owners, children, public transit users?
Is this plan site specific, policy based, or a programmatic change?*

Answering these questions can narrow the search for the ideal participants of a visioning meeting. This exercise can also help to identify who key stakeholders may be as well as the beneficiaries of the developing plan.

When establishing what questions for the meeting it is critical that the thoughts and ideas of the facilitators are not projected onto the participants. The goal of visioning is to listen and understand what the community values and what future they hope to achieve.



2. Community Visioning Workshop: Preparing and Planning for Your Workshop

The visioning session should be held at a well known venue that is accessible to your target demographic. This may be a community center, sports hub, public library, or school. A place that is interesting to or popular for youths in your community would be an ideal location.

Advertising for the event is a key way to expect a substantial turn out. Be sure to alert media and neighborhood groups to get the word out. Today media includes many outlets such as local and regional newspapers, television, radio, and internet sources like online periodicals and blogs.

Business owners associations, non-profits, block groups, the PTA and other local groups may be active organizations in your community and a great source for getting the word out about your meeting. Posting flyers is another way which may contribute to a successful show of people for the meeting. Hanging posters in popular local hubs like coffee shops and public buildings is a great way to advertise your event to a variety of people at once.

It is important to ensure enough response time and clarify if an RSVP from potential participants is necessary. Two weeks turnaround time, from distributing press and promotional materials to the date of the event, should be sufficient to allow for people to schedule around it, however even more of an advanced notice will give more exposure time to the event.

If necessary, be sure to place orders or purchase supplies that will be needed for the event based on the expected turn out. This may include larger sheets of paper, easels, markers, and cameras. It is just as important to note that while advertising for your event to take into account attendance rates are more substantial if free food and refreshments is provided.



The types of questions that are asked at a visioning meeting should be varied and attempt to cover a range of issues and solutions regarding the project. It is important to announce the problem statement or the issue at hand to establish the purpose of the meeting. From there you can ask questions regarding the goals of the community as far as addressing that problem. Barriers are an important topic to bring up however the members of the meeting should also bring up pleasant characteristics of the neighborhood. By highlighting both the positives and negatives, citizens can contribute ideas about how to overcome problems and accentuate the things they like about where they live. Ending the discussion with a final statement that the community agrees on is the intent of the meeting so keep this in mind when crafting questions and finalizing the structure of the assembly.

Developing questions for the visioning statement may be the most challenging task for the meeting's facilitator. It is important to understand how the language used in framing a question can determine the outcome.

What would encourage you to ride your bike every day?

*What would encourage you to ride your bike **to school** every day?*



The difference between these two questions is only two words however it changes the outcomes of the response dramatically. The first question is open ended. It has no focus regarding reasons to ride a bike. Respondents may answer that they ride their bike for transportation, recreation, or fitness. The second question gives an exact destination where they are riding their bike and how that behavior might be affected. Participants may report answers based on infrastructure, commute times, and perceived convenience.

3. Active Commuting Visioning Session: Facilitating the Workshop

The format of the visioning session will depend on the audience and the goal of the meeting. A public meeting may be a convenient time to collect data, ask questions, and listen to concerns. However, if the goal is to construct a community vision statement, then it is important to stay on task and develop a meeting that will engage participants in responding to questions.

Sign in sheets are an easy way to record attendance and establish contacts for “thank yous” and further participation. Meeting agendas with an outline of how the meeting is planned with an estimated schedule should be handed to every participant so that they can follow along. This will allow participants to look over the meeting’s events before it officially starts. This may also help throughout the meeting if time constraints become a problem. The agendas should also have a copy of the questions you will pose throughout the session. Additional informational materials should also be available prior to the meeting. This may include an email sign up for study updates, sign up opportunities for case study audits and other ways to keep the members of the community involved with the study.

A strong and comfortable public speaker should be chosen to facilitate or lead the meeting. When it is time for the meeting to start, the facilitator will call the group together and make sure they all have received handouts and understand the purpose of the meeting. This leader will state the goal and purpose of the visioning meeting, keep track of time, address questions and concerns that are raised, and wrap up the meeting.

Including youth in the planning process will help to identify assets and barriers in your community. Holding a session tailored to their needs and interests may result in valuable information and better community participation and involvement. Creative designs of walkways to school may be the product of a youth visioning session if craft supplies are provided and supervisors are there to help with the exercise.



Step 4. Wrapping Up

Closing the meeting requires tact and insight. Attendants of the meeting may want to continue discussing the issue at hand or may use this opportunity to express other grievances if public officials or media is present. It is imperative that the facilitator masterfully intervene if such things occur. It is not their job to cut someone off however it is their mission to keep those involved in the discussion focused and involved in the larger project at hand.

Step 5: Next Steps

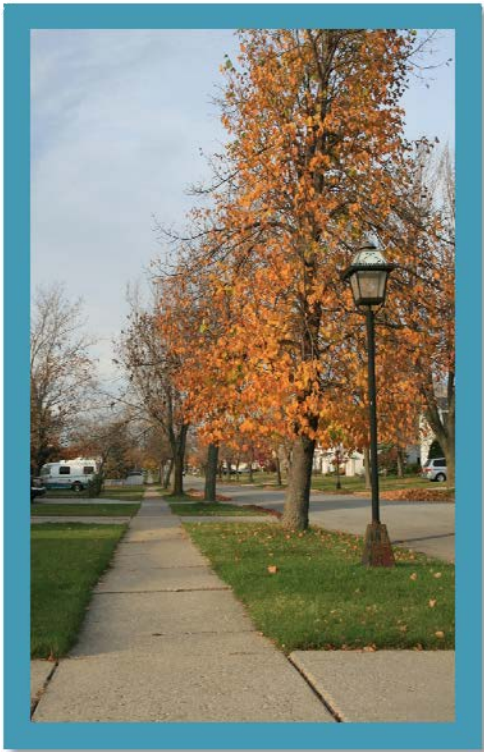
After the vision statement has been crafted and approved of by the public, the project can move forward with the ideas of their community members guiding them. The concerns raised from the meeting can be investigated and remedied or, recommendations can be made regarding these issues. The remainder of the planning process will be predicated on the result of the visioning session and the vision statement.

Bibliography

1. Haines, Anna. "Visioning as Comprehensive Planning Process." <http://www.uwex.edu/ces/cty/winnebago/cnred/documents/G3752.pdf>.
2. McCook, Kathleen de la Pena. *A Place at the Table: Participating in Community Building*, 2000.
3. Oregon Visions Project. *A Guide to Community Visioning: Hands-on Information for Local Communities*, 1993.
4. Walzer, Norman. *Community Strategic Visioning Programs*: Praeger Publishers, 1996.



Picture 1.



What do you see?	What is good for walking?	How to improve?
Light, Tree, Sidewalk, Palmdale St. , Leaves on the ground, grass, cars, a trailer, houses, stop sign, apartments	Air, sidewalk, trees, a long sidewalk for exercise, light to see at night, tiny piece of grass, leaves- food for trees and crunchy	Get rid of Dark cloud, moving floors, fix the bump, add a water park, free hot dog stand and ice cream, install balloons, more tres

Picture 2



What do you see?	What is good for walking?	How to improve?
Street, trees, houses, the road, sidewalk, black thing by tree, 2 people, tiny lady, dirt, a pole, yellow house, bush, leaves on ground, garbage can	Sidewalks, big street so you don't get hit, bush, garbage can, people, recycling, grass	Get rid of pole, water park, put cars away, put trash somewhere else, guy named chuck, underground tunnel, street lights, move tree to other side, crosswalk with a button and you get a hot dog

Picture 3.



What do you see?	What is good for walking?	How to improve?
Sidewalk, sidewalk ends, grass, a tree, telephone wires, mulch/dirt, mailbox, houses, a leaf on the sidewalk that I like, big leaf	Telephone wires so I can call people, trees, stop sign, mailboxes to send letters	Waterpark with dolphins, trampoline, fix sidewalk- it's a dead end, pit of lava at end, <i>Asked how would they get around this:</i> piggy back, have [Derek] lay down use as a bridge, Turtles will rule there

Picture 4.



What do you see?	What is good for walking?	How to improve?
Pile of leaves, big bush, lines on the street, more than 10 mailboxes	Giant pile of leaves to jump in, padding for car accidents	Water park under leaves, escalating sidewalks, volcano in leaves, leaves= pile as big as the road, remove the tire, remove the leaf pile

Picture 5.



What do you see?	What is good for walking?	How to improve?
Shadows of candy, a piñata, skeletons, hanging skeletons to die, it's Halloween, American flag	Houses, "old woman in window makes me feel safe," candy, sidewalks, house with lady	Make candy come out of those things, more old ladies, water park, get rid of lifting thing, balloon rides, hot dogs

Appendix D

Planning Approach and Methodology



Planning Approach and Methodology

The Kid Corridors: Taking Steps to School project is the result of a planning studio, at the Department of Urban and Regional Planning at the University at Buffalo. Planning students were commissioned by the Town of Amherst, to develop a plan to educate and encourage active commuting among children studying in the Williamsville Central School District.

The studio officially began in Fall 2009. Prior to that, studio members participated in a study trip to Stuttgart, Germany in Summer 2009. This trip served to inspire the studio's work for the Town of Amherst. Following Stuttgart, studio members developed a planning approach and methodology to guide the planning process in Amherst, NY. The planning process included several phases (See the Figure below illustrating the planning process).

Figure D-1: Planning Approach



Image source: Kid Corridors

In this section we describe the details of our study trip to Germany, as well as the methodological details underpinning the community visioning process and the analysis of context and current conditions in the planning area.

Inspiration

The studio team's work in Amherst was inspired by a summer 2009 study trip to Stuttgart, Germany. The studio team spent eleven days in Stuttgart, observing the commuting behavior of children, as well as studying the built environment, culture, programs, policies and projects that enabled a majority of children to commute to school using active means of transportation.

Studio members *interviewed* school children, teachers, school administrators, regional and city planners, bicycle planners, and a school architect to understand the factors that enabled a majority of children to walk (or, use public transit) to travel to school.

Studio team members conducted *daily field observations* of school settings and neighborhoods. For example, on May 14th 2009, the studio team members spent the morning *observing the arrival* of school

children at Friedrich-Eugens Gymnasium, an elementary school for children aged 6-10. Studio team members documented children's mode of transportation, the presence of escorts, children's backpack size, preferred walking routes and any activities on the way.

At other schools, the Ludwig Gymnasium (for children ages 9-15) and a school in Tübingen, Germany (for children ages 7-9), studio team members *visited classrooms* and interviewed students about their preferred means of commuting to school, and any benefits or barriers of doing so.

Community Visioning Sessions

The Kids Corridors studio began its work in Amherst with the launch of a community outreach effort. Studio members conducted community visioning sessions¹ to identify Amherst residents' -both children and adults' -vision of what constitutes an ideal neighborhood for children to walk and bicycle to school. Since this plan is primarily for children, studio team members made considerable effort to reach out and include WCSD children and their families in the planning process. Team members organized separate community visioning sessions: one for children and one for the parents of Williamsville.

Children and parents were invited to the community visioning session through media such as local newspapers (Amherst Bee, Buffalo News, and UB Reporter), local public radio station (WBFO), as well as by distributing flyers through the school district. About 8,000 invitational flyers to the visioning sessions were distributed to all K-8 WCSD children at school, and children were asked to take the flyers home to their families. Flyers were also posted in businesses and public spaces all over Amherst to attract more people. The flyers used a double-sided page design to carry information for both children and their parents, respectively. One side of the flyer, advertised a youth assembly, using graphics of superheroes to appeal to children. The other side offered information about the adult session.

Simultaneous visioning sessions for children and adults were held at the Amherst Pepsi Center, located at 1615 Amherst Manor Drive on Wednesday September 30th, 2009 from 6:00-7:10pm. The sessions were covered in the local media, including TV Channel 4, WIVB.

Youth Visioning Session:

Children are a key stakeholder in the Kid Corridors plan. For this reason, the planning process included opportunities for youth to participate and shape the recommendations. Studio members invited children, in grades K-8, to participate in a visioning exercise.

The youth visioning exercise was a two-phase interactive session. In the first phase, youth participants received an 8X11 worksheet and art supplies (including crayons, markers, scissors, glue, pipe cleaners, feathers, old postcards, pom poms, and construction paper) to depict a route that would be ideal for walking or bicycling to school. Younger children (K-4) were encouraged to use drawings in their depiction. Older children were told to express, in any way they wanted (through drawings or text), an ideal walking and bicycling route on paper.

¹ The Safe Routes to School grant refers to such sessions as "active assemblies."

On the back side of each worksheet (see Appendix A for this worksheet), children were asked two behavioral questions. First, *“How much do you like going to school?”* Children indicated their preference on a range of one to five, by coloring one to five stars provided on the worksheet. Answers to this question allowed the studio team to assess whether the youth’s opinion of school might shape their image of an ideal neighborhood.

Second, children were asked how they commuted to school. Specifically, the worksheet included the question: *“Please circle the picture below that shows the way you usually get to school.”* Children indicated their preference by circling available images (including a school bus, a car, a bicycle, a scooter, sneakers, and rollerblades).

Following the completion of individual art work in phase I, in phase II studio members asked each youth participant to contribute *one* favorite feature from their art work (a drawing, a word, etc.) to a collective representation of an ideal route on a larger sheet of paper. The result was a relatively collective youth vision of what constitutes a “perfect neighborhood.”

Youth participants were awarded certificates of participation at the end of the session.

The findings from the youth visioning session are documented in Chapter 2 of the report, and inform the recommendations of the Kids Corridor plan.

Adult Residents' Visioning Session:

The adult visioning session comprised of a large group visioning exercise, followed by smaller group discussions. A large group discussion of potential solutions to promoting walking and bicycling in the Town of Amherst ended the exercise.

At the outset, participants were asked to describe the current conditions of their neighborhoods and identify features that hinder or promote their children’s ability to walk or bicycle to school. Specifically, residents were asked to “describe the attributes of a community that would allow [their] children to be healthy?” This conversation yielded a statement of vision by Amherst residents.

Following the large group process, residents participated in facilitated small group discussions to answer the following questions.

- How does your neighborhood currently allow for physical activity?
- How do you encourage your children to be active?
- How does your neighborhood impede your children from being active?
- What are the obstacles to promoting physical activity in your household?
- What motivates your children to walk or bike to school?
- What prevents your children from walking or biking to school?

Results from small group discussions were shared with the entire group. When the smaller groups were combined, they were asked to identify solutions to overcome the obstacles to children’s active commuting.

The vision, opportunities, and barriers identified by adult residents in this visioning session are documented in Chapter 2 of the report.

Interviews of key stakeholders

The studio team interviewed a number of stakeholders in the Town of Amherst to document their view of active commuting and SRTS initiatives in the town and region. Interview questions drafted and used by the studio team are available in this Appendix J. All interviews were completed in Fall 2009.

Table D-1: Stakeholder Interviews

Name	Title	Date Interviewed
Justin Booth	Director of Green Options Buffalo/NYS SRTS Coordinator	October 12, 2009
Donna Chestnut	Town of Amherst GIS Analyst	September 3, 2009
Rick Gillert	Amherst Town Planner	August 28, 2009
Tom Martuski	Williamsville Central School District Superintendent	September 23, 2009
Christopher Schregel	Town of Amherst Senior Engineer	September 3, 2009

Data Source: Kid Corridors team

Review of current conditions²

The studio team gathered and analyzed information about current conditions in the planning area that are likely to affect children's ability to walk and bicycle to school. Information was collected about the following conditions.

- parents' view of barriers and opportunities surrounding walking and bicycling to school
- demographic context
- condition of the built environment
- health and safety trends
- legal constraints and opportunities
- current commuting patterns

² Information coming directly from the residents of the WCSD is highly valuable, but there are certain conditions that not everyone is familiar with. Examples of which are exact town and district boundaries, as well as laws that have an effect on walking patterns. A study of current conditions and policies was important to pursue. United States Census information was studied and analyzed, and GIS maps of the built environment were created. Current WCSD policy, the Amherst Town code, State Law and Federal policy on the SRTS grant were all reviewed.

All of the tools used by the planning studio framed recommendations on programs and policies to increase walkability in the WCSD. The goal of implementing all of these methods is to have an informed report from community input, the current conditions in the district and best practices from national programs and policies. The following section will provide more detail each specific method.

Data for current conditions came from a variety of different sources. We document the key method and data source below.

Documentation of Parents and Adult Residents' Views

Residents have first-hand knowledge and experiences with their own environments. For this reason, studio members sought and relied on residents' views of current walking/bicycling conditions. Specifically, studio members documented the opinions and preferences of WCSD parents and children by using two sources of information. First, studio members relied on an analysis of notes of the adult visioning sessions to document residents' preferences and concerns.

Second, studio members analyzed raw data from a survey of WCSD parents and children – known as the SRTS Survey Spring 2009 in this report - previously administered by Mr. Mark Melewski, a consultant on for the Town of Amherst as part of the SRTS initiative. The SRTS survey yielded several kinds of data, many of which were compiled and analyzed for other parts of this plan. Parents' views were documented by analyzing the open-ended comments provided in the parent survey.

Of all surveys sent out, 5.9% of elementary schools parents and 7.0% of middle schools parents provided open-ended comments. Among elementary school parents, most comments were provided by parents from Dodge Elementary (8.5%) and the fewest by parents from Forest Elementary (4.5%). Among middle schools, parents from Casey Middle offered the most comments with 13.1% of the parents providing feedback. Parents from Heim Middle had the lowest response rates (5.9%) for open-ended comments from middle schools.

Table D-2: Parents' Response Rates for Open-Ended Comments- SRTS Survey Spring 2009

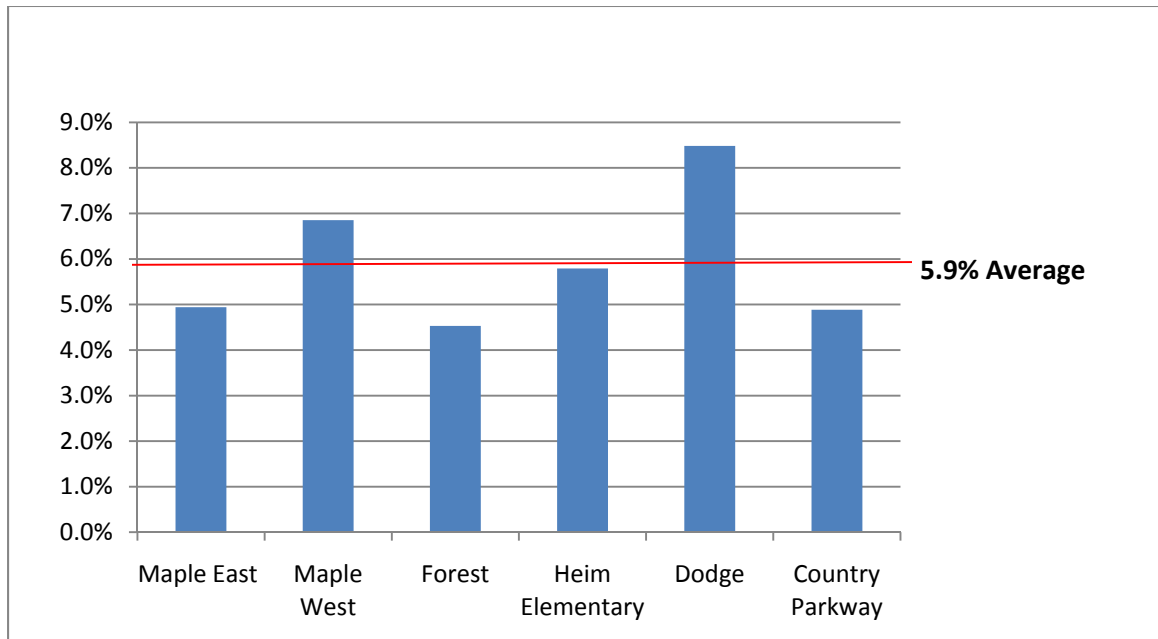
Elementary Schools	Surveyed	Commented	Response Rate (%)
Maple East	668	33	4.9
Maple West	642	44	6.9
Forest	596	27	4.5
Heim Elementary	639	37	5.8
Dodge	613	52	8.5
Country Parkway	614	30	4.9
Total	3,772	223	5.9

Middle Schools	Surveyed	Commented	Response Rate (%)
Mill	906	61	6.7
Transit	961	68	7.1
Heim Middle	629	37	5.9
Casey	749	98	13.1
Total	3,245	227	7.0

K-8 Total	7,017	450	6.4
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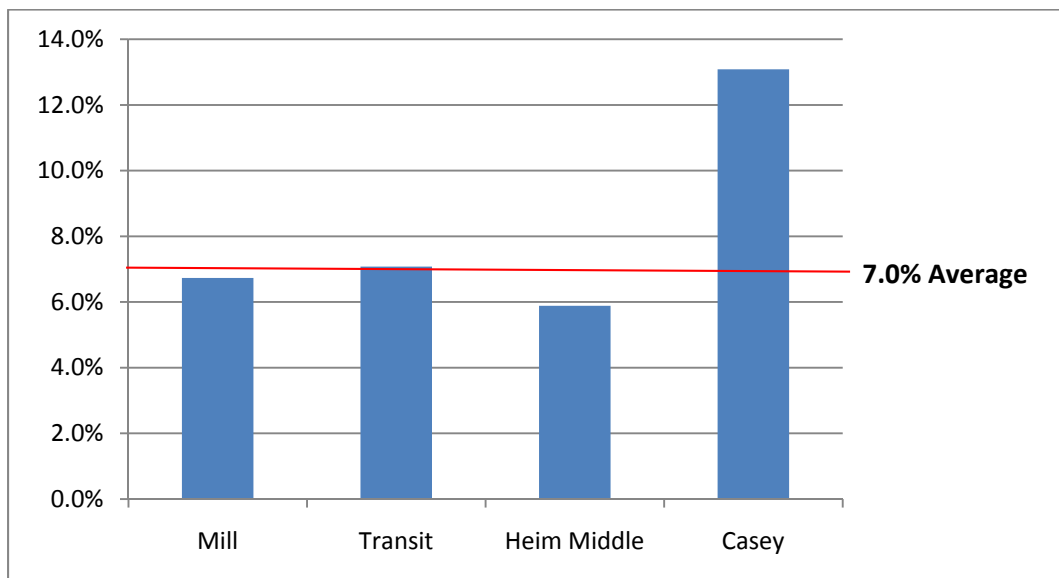
Source: Safe Routes to School Survey, Spring 2009

Figure D-2: Elementary School Parents' Response Rates for Open-Ended Comments - SRTS Survey Spring 2009



Source: Kid Corridors Team

Figure D-3: Middle School Parents' Response Rates for Open-Ended Comments - SRTS Survey Spring 2009



Source: Kid Corridors Team

Parents from the WCSD provided a total of 450 open-ended comments. These comments were reviewed and grouped into thematic categories such as 'Infrastructure,' 'Crossing Guards,' 'Safety.' Based on a review of these comments, unique barriers to and solutions for active commuting were identified.

Demographic context

The studio team conducted an analysis of the demographic conditions of the planning area. Demographic conditions in the larger Town of Amherst were used as a proxy for demographic conditions in the WCSD planning area as recent census data for this geographic scale was not available. Demographic conditions in Amherst were compared to those in Erie County and New York State. To allow for comparisons, all raw data was converted to percentages. Whenever allowed by the data, all demographic variables were reported for the target population of children in grades K-4, 5-8, and K-8. All demographic data was obtained from the 2008 American Community Survey conducted by the US Census Bureau.

Health and Safety Trends

Due to a lack of data at a small geographic scale, health and safety trends in the larger Town of Amherst were used as a proxy for conditions in the smaller WCSD planning area. Data on ambulatory disability was obtained from the 2008 American Community Survey.

Crime data was obtained through the Federal Bureau of Investigation's Uniform Crime Reports. Pedestrian and bicycle crash data for the calendar year of September 15, 2008 to September 14, 2009 was obtained from the Town of Amherst Police Department. This data was spatially represented and analyzed using the ArcGIS software.

Transportation and Traffic Trends

Vehicle availability, mode of transportation to work, and time leaving for work data was obtained from the 2008 American Community Survey. Again, like several other variables, the data was obtained for the Town of Amherst, and used as a proxy for conditions in the WCSD planning area. Data was converted into percentages to allow for comparison among three geographic scales (Town of Amherst, Erie County, and New York State).

Traffic volume data was obtained from the Greater Buffalo Niagara Region Transportation Council. This data was represented and analyzed using the ArcGIS software.

Built Environment

The studio team analyzed the 'walkability' features of the built environment within the Williamsville Central School District and the Town of Amherst. Land use mix was computed using Shannon's Entropy Index. Net residential density was calculated by dividing total housing units by total acreage of residential land.

GIS data such as bike paths, land use parcels, school district boundaries, sidewalks and traffic counts, was obtained from the Town of Amherst, the New York State Department of Transportation, and the Greater Buffalo Niagara Region Transportation Council. Data was represented and analyzed through the use of ArcGIS software.

Current commuting patterns (SRTS Spring 2009 Survey)

Information about current commuting patterns was obtained from data collected through the SRTS Spring 2009 Survey. Teachers were asked to tally the number of students, and their mode of travel to and from school, in each class two or three times on the Tuesday, Wednesday and/or Thursday during the week of June 8, 2009. Students were offered seven travel mode options as reported below. Weather conditions were reported by teachers to be sunny or overcast during this time period.

As part of the 2009 SRTS survey, parents of elementary or middle school children in the WCSD were also asked to complete a two-page mail survey by the Town of Amherst. Responses from the parents' survey offers more detailed information than the study survey (which simply tallies the mode of transportation to and from school). The parents' survey also asked about perceptions and barriers to walking and biking to and from school.

Students' Response Rates

A significant proportion of students participated in the in-class tallies. The average participation rate for the elementary schools in WCSD was 65.8% and 57.7 % for the middle schools. Among the elementary schools, Maple East had the highest participation rate with 75.1% and Dodge Elementary had the lowest with 58.1%. Among the middle schools, Heim Middle had the highest participation rate with 64.1% and Casey Middle had the lowest with 52.6% (see table D-3).

Table D-3: Students' Response Rates

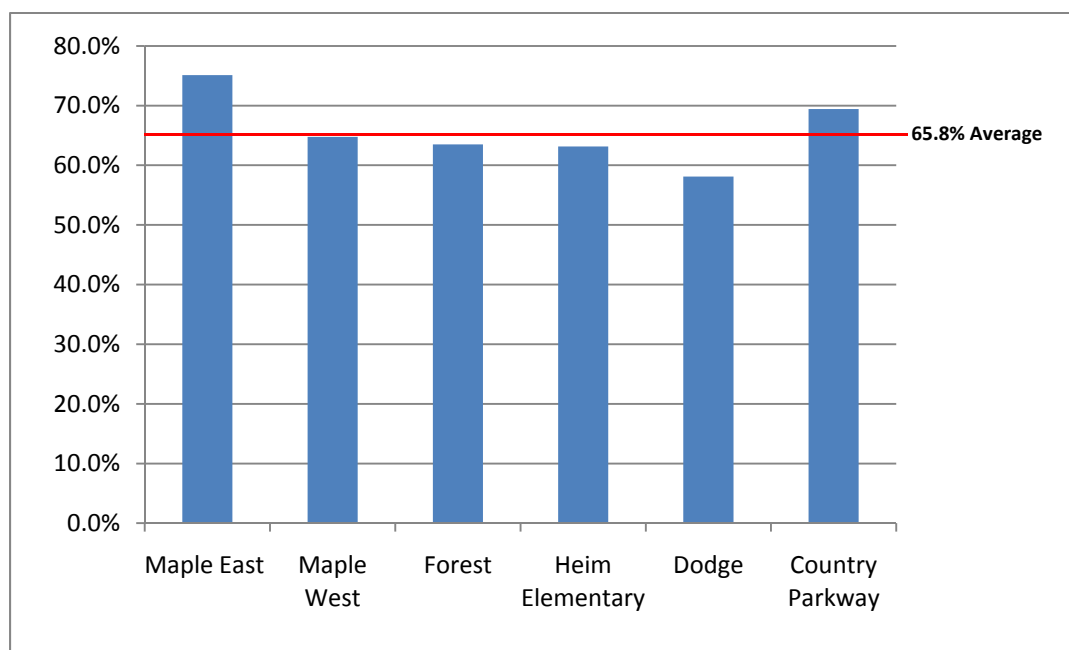
Elementary Schools	Average number of student respondents per day	Surveyed	Percentage (%)
Maple East	501.7	668	75.1
Maple West	415.7	642	64.8
Forest	378.5	596	63.5
Heim Elementary	403.5	639	63.1
Dodge	356.2	613	58.1
Country Parkway	426.2	614	69.4
Total	2,481.8	3,772	65.8

Middle Schools	Average number of student respondents per day	Surveyed	Percentage (%)
Mill Middle	550.7	906	60.8
Transit Middle	523.0	961	54.4
Heim Middle	403.5	629	64.1
Casey Middle	394.2	749	52.6
Total	1,871.4	3,245	57.7

K-8 Total	435.3	7,017	62.0
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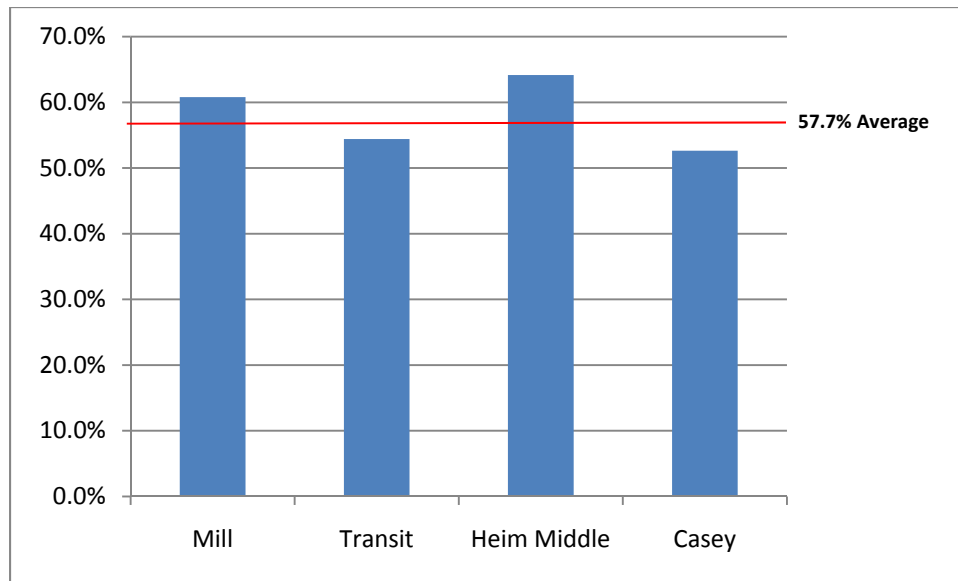
Data Source: Kid Corridors Team

Figure D-4: Proportion of Elementary School Students Respondents per Day



Data Source: Kid Corridors Team

Figure D-5: Proportion of Middle School Students Respondents per Day



Data Source: Kid Corridors Team

Parents' Response Rates

Response rates for the parents' survey were much lower than the students' survey. On average, 18.5% of elementary school parents and 23.3% of middle school parents responded to the survey. Among elementary schools, Dodge Elementary had the highest parent response rate (24.6%), while Maple East had the lowest (13.6%). The low response rates by parents at Maple East could indicate that active commuting is not a matter of concern among parents at this school. Among Middle Schools, the highest response rates were for Casey Middle (28.8%), which were incidentally among the highest in the entire school district. The lowest response rate was among parents of students attending a middle school was for Mill Middle (20.4%) (see Table D-4).

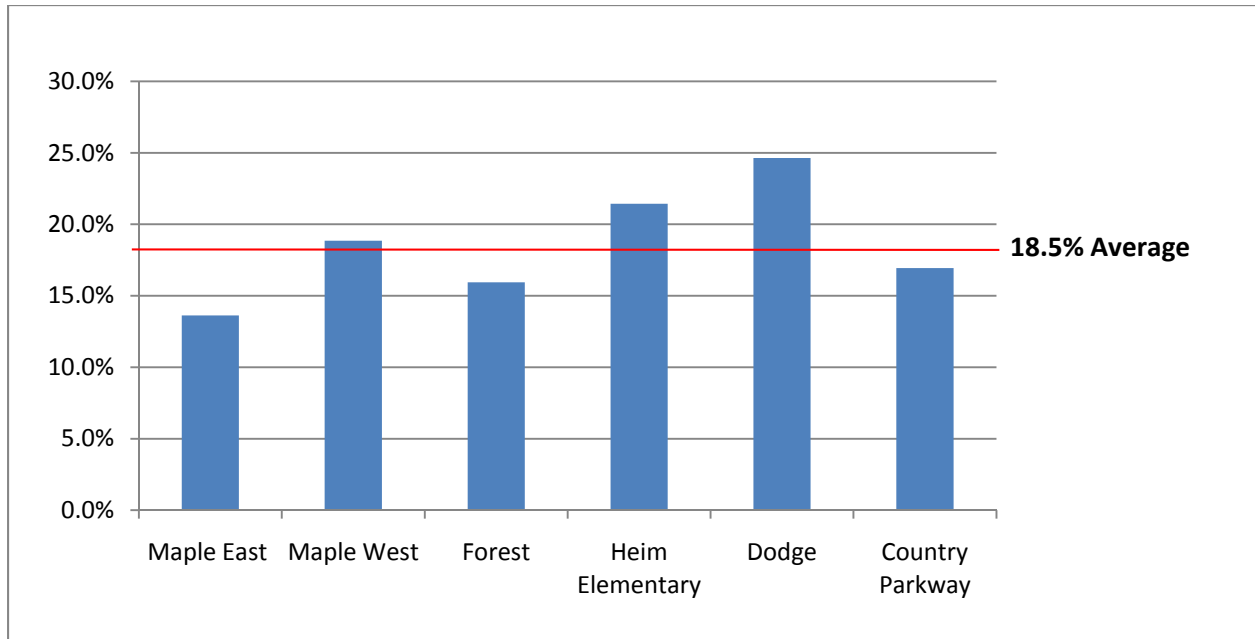
Table D-4: Parents' Response Rates

Elementary Schools	Surveyed	Responses	Response Rate (%)
Maple East	668	91	13.6
Maple West	642	121	18.8
Forest	596	95	15.9
Heim Elementary	639	137	21.4
Dodge	613	151	24.6
Country Parkway	614	104	16.9
Elementary Total	3,772	699	18.5

Middle Schools	Surveyed	Responses	Response Rate (%)
Mill Middle	906	185	20.4
Transit Middle	961	216	22.5
Heim Middle	629	138	21.9
Casey Middle	749	216	28.8
Middle Total	3,245	755	23.3

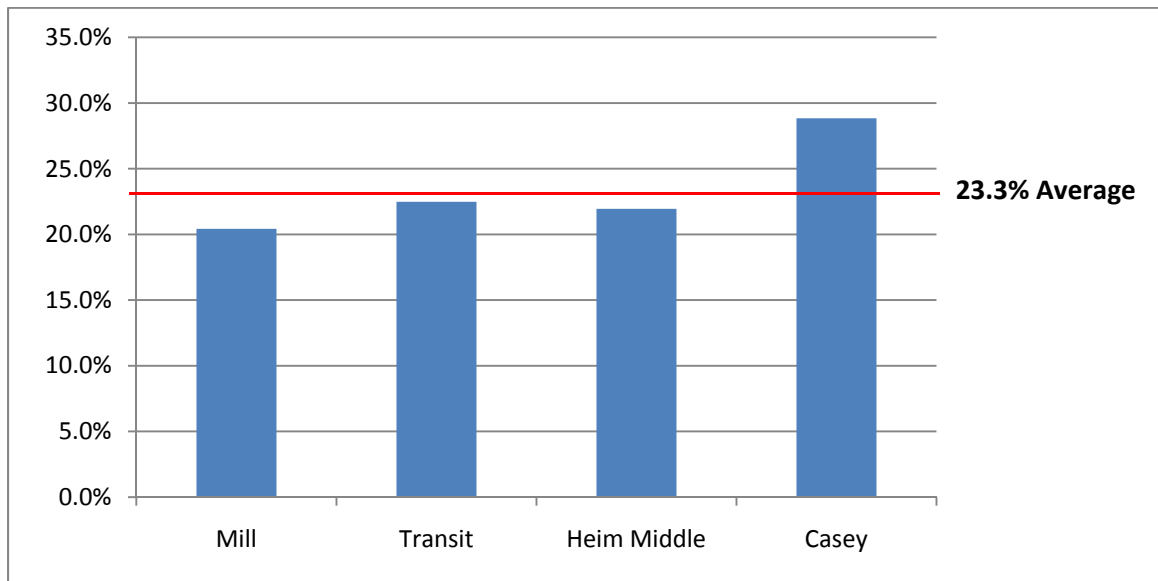
K-8 Total	7,017	1,454	20.7
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Figure D-6: Elementary School Parents' Response Rates - SRTS Survey 2009



Source: Safe Routes to School Survey, Spring 2009

Figure D-7: Middle School Parents' Response Rates - SRTS Survey 2009

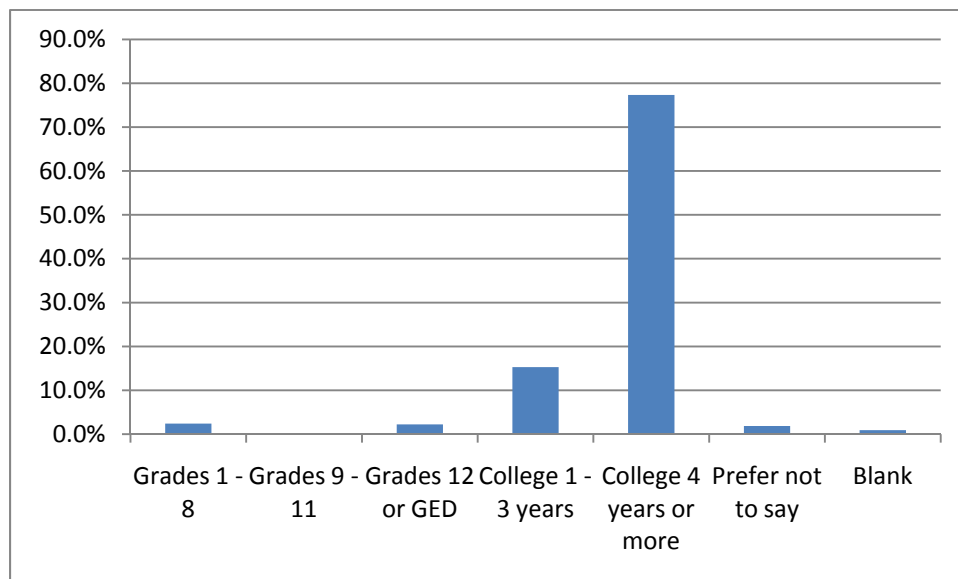


Source: Safe Routes to School Survey, Spring 2009

Educational Attainment of Parent Respondents

A majority of parents responding to the SRTS Survey Spring 2009 had four or more years of college, 77.4%, and 15.3% of parents had one to three years of college. Compared to Amherst as a whole – where only 54% of residents have an associate's degree or higher, parent respondents have higher levels of educational attainment (see FigureD-8). This suggests that the responses obtained from the SRTS survey may be slightly biased in favor of people with higher levels of education.

Figure D-8: Parent Respondents' Educational Attainment



Data Source: Safe Routes to School Survey, Spring 2009

Cost of Driving to School in WCSD

Economic cost

This analysis is modeled after a similar study conducted in Portland, Oregon[1] to demonstrate the money WCSD parents could be saving if they no longer drive their children to school. Data for this analysis was obtained from the Internal Revenue Service (IRS), Environmental Protection Agency (EPA), New York State Department of Education, and the SRTS Survey.

To determine the total cost of driving children to school using a personal vehicle in the WCSD planning area, studio members computed the average cost of driving per mile and estimated what these costs would be for all parents driving their children to school in the WCSD.

The average cost of driving per mile was computed using federal reimbursement rates stipulated by the IRS. According to the IRS, a federal reimbursement rate of \$0.55 per mile is the current operating cost of driving a vehicle[2]. This rate accounts for the price of gas, the vehicle maintenance per mile as well as other expenses associated with owning an automobile. This rate was used to determine the per mile cost of driving children to school in the WCSD.

The total mileage driven by WCSD parents was estimated from the SRTS Spring 2009 survey of WCSD parents. Among the 7017 parents surveyed, 1040 (14.8%) reported driving their children to and or from school every day. These parents also reported the distance from their home to their child's school (using quarter mile intervals). This information was estimated to develop the total miles driven by WCSD parents.

Table D-5: Calculations for cost of Driving

Heim Elementary	Drivers to School
Less than .25 Mile	5
Per mile cost of driving	0.55
School Days	180
Annual Cost of driving per person	12.375
Students living within .25 mile	96.82
Number Driving	48.41
Cost for all Students	599.06
Daily miles driven (.125 average)	6.05
Daily average cost	\$3.33

Data Source: Kid Corridors Team

Environmental cost

Personal vehicle use not only hurts the driver's wallet but has detrimental effects on the environment. Automobiles emit Carbon Dioxide which is a toxic chemical known as a greenhouse gas. The effects of green house gases contribute to global warming or climate change. Studio members computed the carbon emissions produced from driving children to school within the WCSD planning area.

The Environmental Protection Agency has set standard rates at which to calculate the amount of harmful greenhouse gases expelled from personal vehicle use. Personal Vehicle Average (PVA) is the calculated average of miles driven for every gallon of gas. The EPA sets this amount at 20.3 miles per gallon (mpg) which is a conservative estimate with the increased amount of Sport Utility Vehicles, and older cars with inferior fuel economy. For every gallon of gas used to run a motor vehicle, 19.4 pounds of CO_2 are emitted.

The EPA's equation to calculate the amount of carbon dioxide requires the below information:

$$19.4\text{lbs } CO_2 \div 20.03\text{mpg} = 0.956\text{lbs } CO_2\text{per mile}$$

$$0.956\text{lbs } CO_2\text{per mile} \times 0.99 \text{ oxidation rate} = 0.946\text{lbs } CO_2 \text{ per mile emitted into the air}$$

Works Cited

1. Cortright, J., *Portland's Green Dividend*. 2007, CEOs for Cities.
2. *Travel, Entertainment, Gift, and Car Expenses*. 2009, Department of the Treasury, Internal Revenue Service.

Case Study Methodology

Purpose

The objective of the case study was for Planning Studio members to understand and document the physical and social opportunities and barriers for a child's active commute to school. The Planning Studio members focused their examination on selected case study sites in the Williamsville Central School District ("WCSD"). The case study was completed utilizing two tasks. A physical assessment was conducted by Planning Studio members. An interactive assembly was held at WCSD afterschool programs, where elementary and middle school students participated in cognitive mapping and a virtual walking exercise. These tasks, as described further on, were conducted with intent to raise the awareness of walking among WCSD students, and also to aid the Planning Studio to better understand the walking habits of children, as well as the conditions of the built environment within which they walk in Amherst, NY. Lessons learned from the Physical Assessment and Interactive Assembly are documented Chapter 8: Findings.

Case Study Site Selection

Among the ten elementary and middle schools in the Williamsville Central School District, Planning Studio members selected three schools, two elementary and one middle school, and their surrounding neighborhoods for inclusion in the case study. The neighborhoods encompass a 1-mile radius zone around the schools. The 1-mile radius zone was selected based on previous environmental assessment studies that cite this distance as a reasonable walking or biking commute.

Heim Middle, Heim Elementary and Country Parkway Elementary were selected for the case study. These case studies were selected following the advice of Town of Amherst staff and the WCSD, as well as for reasons stated below. Overall, the selected schools represent a broad cross-section of built environment typologies in the Town of Amherst, as well as diverse walking behavior among the school-going population.

Frequency of active commuting among students

To fully understand the connection between the built environment and walking and biking behavior of school children, it was important to compare schools that have markedly different proportions of numbers of students walking and biking to and from school. Data collected by the Town of Amherst in Spring 2009, and analyzed by Planning Studio members, shows that the Heim Middle School has the highest walking and biking rate (20% of student respondents) among the 10 WCSD schools, whereas Country Parkway has a low level (1%) of walking and biking to school. Country Parkway was ranked 9th out of 10 WCSD schools in regards to walking and biking. Heim Elementary was ranked 5th out of 10 schools with 5% of the school's students walking and biking to school during the survey. Both elementary schools and Heim Middle School were selected for the case study exercises.

Walking/Biking Infrastructure

The location and condition of physical infrastructure, sidewalks and bicycle lanes influences children's decision to walk, and their parents' permission to allow them to do so. Therefore, the case study

included environments that facilitate and environments that impede the ability to walk or bike. A map created using GIS data of the sidewalk infrastructure (data provided by the Town) shows that Country Parkway has minimal physical infrastructure while Heim Elementary and Heim Middle Schools have relatively adequate walking infrastructure. According to the Amherst SRTS proposal, the proposal calls for the bulk of infrastructure improvements to occur at Country Parkway Elementary where walking infrastructure is currently unavailable. Heim Middle and Heim Elementary schools will receive minimal infrastructure improvements by adding missing links to existing sidewalk networks around both schools.

Grade requirements of the Safe Routes to School Grant

The Planning Studio was charged with the task of preparing educational and encouragement tools for the WCSD as part of a SRTS grant received by the Town of Amherst. The SRTS grant requires that the initiative focus on children attending Kindergarten through 8th grade. Therefore, selected case study schools included elementary and middle schools.

Age of students

The age of a child may impact their walking habits. For that reason the case study included schools that serve diverse age groups (within the range recommended by the SRTS program, which focuses on children in Kindergarten through 8th grade). As a result, the case studies included both elementary (Heim Elementary and Country Parkway) and middle schools (Heim Middle) to compare walking habits of children at various ages. Heim Elementary and Heim Middle School were included to compare different age groups within the same physical environment. Comparing Country Parkway Elementary and Heim Elementary schools will allow the studio team to determine if the built environment has an effect on children's walking or biking habits within the same age group.

Safe Routes to School Grant recipients

The Town of Amherst's SRTS proposal designates several WCSD schools as sites for infrastructure improvements using SRTS monies. The selected case study sites, Heim Elementary, Heim Middle, and Country Parkway are all slated to receive these funds to varying degrees. As mentioned previously, Country Parkway is scheduled to receive a bulk of funding for sidewalk construction. Inclusion of this case study site, in particular, offers an opportunity for a pre- and-post evaluation of whether the SRTS-funded infrastructure improvements have a measurable impact on active commuting among children.

Case Study Exercises

As previously mentioned, the Planning Studio completed the case study in two tasks. Specific descriptions of each task are as follows.

TASK 1: Physical Assessment

Planning Studio members performed an audit of the built environment located within a one-mile assessment zone around each of the three selected schools. For this audit, Planning Studio members evaluated street segments and intersections along a route, inside of the one-mile zone, that led back to

the school location. Route selection was based on data collected from the survey conducted by the Town of Amherst in Spring 2009, and analyzed by Planning Studio members.

Route Selection

Routes were selected utilizing location data collected during the Town's Spring 2009 survey. For this survey, parents were asked to provide the name of their child's school as well as the intersection closest to their home. The Planning Studio analysts narrowed survey responses to those who indicated their child attended one of the selected case study schools. These parent locations were mapped using GIS software. The Planning Studio members found that many survey respondents were located inside the one-mile zone designated for case studies. Moreover, several respondents reported the same intersection location, indicating that clusters of parents were residing in neighborhoods located in close proximity to their child's school.

There were 39 parent survey responses from Country Parkway that were within the one-mile zone. There were a total of 64 parent survey responses from Heim Middle and 43 from Heim Elementary. As Country Parkway had the lowest response rate, the Planning Studio randomly selected 39 locations each from Heim Middle and Heim Elementary to allow for comparable evaluation. Several respondents reported the same location; therefore assessing 117 parent locations overall was achievable by evaluating routes that included repeated locations.

The methodology employed in this selection allowed the Planning Studio to compare a wide compilation of survey data to their field work. Additionally, the route selection process allowed the Planning Studio to audit actual routes that children attending case study schools may take to walk or bike to school. Using GIS software, the Planning Studio analysts computed the shortest-distance routes to school from selected parent locations. Figure 1 & 2 indicate routes derived from this process. Each intersection and street segment located along each route was analyzed and documented. As indicated in the diagram, the evaluation was not limited to parent locations; all intersections and segments along each route were analyzed. Overall, the Planning Studio evaluated 34 intersections and segments around Country Parkway Elementary as well as 50 intersections and segments around Heim Schools.

Assessment Tools

The Planning Studio audited intersections and street segments utilizing two tools: the Physical Environment Conditions Assessment Tool and the Intersection and Street Segment Inventory Tool.

The Physical Environment Conditions Assessment Tool was utilized to evaluate the quality of physical conditions found at each intersection and street segment along the assessment routes. The Planning Studio members were asked to rate the physical environment, including the condition of landscaping, sidewalks, crossing mechanisms, viewsheds, available amenities, architectural features and safety perceptions. This tool employed a series of questions that utilized rating scales to indicate quality.

The Planning Studio members used Intersection and Street Segment Inventory Tools to document the location and availability of various components of the built environment. Using a combination of

photography, paper inventory tools and handheld GPS units, Planning Studio members documented the location and availability of public benches, streetlight types, crosswalk markings, signage and other physical features found along assessment routes. GPS coordinates were cross-referenced with components hand-drawn on each inventory tool. These features were added to the Planning Studio's GIS map analysis to illustrate where various amenities and components were available.

Task 2: Interactive Assembly

Cognitive mapping is an exercise developed to gather spatial perceptions of an area [5]. The participant expresses the characteristics that are most easily recalled about their neighborhood.

The Planning Studio conducted a Cognitive Mapping Exercise at an Interactive Assembly held at a Just For Kids Afterschool Program site at Country Parkway Elementary school. WCSD students in grades 3 and 4 at the Just For Kids sites were eligible to participate in the Cognitive Mapping Exercise. Nine children participated.

During the Cognitive Mapping Exercise, Planning Studio members lead WCSD students in a process to produce cognitive maps of their usual route to school. The goal of this exercise was to assess the child's current view of their walk to school. WCSD students worked with art materials (provided by UB) such as crayons, markers and colored pencils to prepare the cognitive maps. The studio team analyzed and documented the findings from the Cognitive Mapping Exercise, highlighting information that reinforced the importance of walking, and planning walking routes, among WCSD youth.

The second part of the Interactive Assembly had the participants view five pictures taken during Task One of the case study by members of the Planning Studio. The children were asked three questions: What do you see in the picture? What do you see that is good for walking? What would you do to improve walking in this picture? Their answers provided insight into children's awareness of physical infrastructure when walking, motivations along the way, and existing active commuting barriers.



American Community Survey 2008 Raw Data

	Town of Amherst	Erie County	New York State
Total Population	119015	909845	19490297
% of NYS	0.61%	4.67%	-
% of Erie	13.08%	-	-
Age Cohorts (Universe: Total Population)			
less than 25 years old	33.85%	32.38%	32.93%
25 to 50	30.31%	32.27%	35.16%
50 to 75	25.85%	27.22%	25.38%
75 + years old	9.99%	8.13%	6.53%
K-8 Children (Universe: Total Population)			
5 - 9 years old	4.83%	5.60%	5.95%
10 to 14 years old	6.01%	6.29%	6.35%
Combined	10.84%	11.89%	12.30%
Gender (Universe: Total Population)			
Male	49.28%	48.19%	48.55%
Female	50.72%	51.81%	51.45%
Gender (Universe: Kids 5-14)			
Male 5-9	22.23%	24.13%	24.93%
Male 10-14	28.51%	26.77%	26.28%
<i>Male 5-14</i>	50.74%	50.90%	51.21%
Female 5-9	22.33%	22.98%	23.44%
Female 10-14	26.93%	26.12%	25.36%
<i>Female 5-14</i>	49.26%	49.10%	48.80%
Total Kids (Universe Kids 5-14)			
5-9 years old	5751	50987	1159495
5-9 years old %	44.56%	47.11%	48.37%
10-14 years old	7155	57248	1237840
10-14 years old%	55.44%	52.89%	51.63%
<i>5-14 years old</i>	12906	108235	2397335
Race (Universe Total Population)			
White	86.58%	81.40%	67.18%
Black	4.37%	13.54%	15.91%
Asian	6.85%	1.99%	6.99%
Other	2.20%	3.07%	9.92%

	Town of Amherst	Erie County	New York State
Race (Universe Kids 5-14)			
White 5-9	82.00%	74.25%	61.34%
White 10-14	87.21%	74.74%	62.09%
<i>White 5-14</i>	84.89%	74.51%	61.73%
Asian 5-9	7.02%	1.46%	6.98%
Asian 10-14	4.01%	2.49%	6.20%
<i>Asian 5-14</i>	5.35%	2.00%	6.58%
Other 5-9	10.98%	24.29%	31.68%
Other 10-14	8.78%	22.77%	31.71%
<i>Other 5-14</i>	9.76%	23.49%	31.69%
Educational Enrollment (Universe: Kids 3 yrs and over)			
Total: K - 8th	11653	99002	2158781
K - 4th	52.00%	53.62%	54.06%
5th - 8th	48.00%	46.38%	45.94%
Educational Attainment (Universe: Population 18 Years or Older)			
< high school degree	4.93%	10.96%	15.83%
High school degree	41.06%	51.99%	46.91%
College degree	54.01%	37.05%	37.26%
Ambulatory Difficulty (Universe: Population 5 Years or Older)			
Total %	4.78%	7.24%	6.72%
Kids 5-17	0.04%	0.12%	0.12%
Ambulatory Difficulty (Universe: Kids 5 to 17)			
5-17 years old	0.68%	0.72%	0.30%
*not available for 5-14			
Family Households (Universe: Family Households)			
Married couples	83.29%	72.18%	70.12%
Male holder, no wife	5.62%	6.29%	7.29%
Female holder, no husband	11.09%	21.53%	22.59%
Homes (Universe: Housing Units)			
Single Family	65.04%	56.62%	41.80%
Housing Units (Universe: Housing Units)			
Total	49767	423118	7977383
Occupied	97.92%	90.79%	89.47%
Vacant	2.08%	9.21%	10.53%

	Town of Amherst	Erie County	New York State
Tenure of Occupied Units (Universe: Occupied Housing Units)			
Owner	73.20%	65.96%	55.29%
Renter	26.80%	34.04%	44.71%
In Labor Force (Universe: Population 16+ Years Old)			
Unemployed	4.50%	6.26%	6.27%
Employed	95.37%	93.57%	93.44%
Vehicles (Universe: Workers 16+ Years Old)			
No vehicle available	2.07%	4.92%	20.86%
Mode of Transportation to Work (Universe: Workers 16+ Years Old)			
Drove alone	84.23%	80.46%	53.71%
Carpooled	7.78%	8.31%	7.68%
Public Transport	2.12%	3.92%	26.66%
Walked	1.82%	2.83%	6.33%
Taxi, Motorcycle, Bicycle	0.94%	1.40%	1.73%
Worked at home	3.11%	3.08%	3.89%
Time Leaving Home (Universe: Workers 16+ Years Old)			
7:00 am to 7:29 am	11.02%	14.31%	14.52%
7:30 am to 7:59 am	15.54%	13.93%	12.61%
8:00 am to 8:29 am	19.01%	12.18%	13.98%
8:30 am to 8:59 am	8.42%	6.89%	7.61%
9:00 am to 9:59 am	8.94%	5.49%	7.98%
Household Income* (Universe: Households)			
Less than \$50,000	37.98%	51.28%	44.97%
\$50,000 to \$99,999	30.64%	31.43%	29.74%
More than \$100,000	31.38%	17.29%	25.29%
*2008 inflation adjusted \$			
Poverty (Universe: Total Population)			
Total % below	8.22%	13.58%	13.61%
Kids (5-14) below	0.31%	2.22%	2.35%
Poverty (Universe: Kids 5-14)			
Total % below	2.68%	18.42%	18.87%



United States Code Annotated

Title 23. Highways

Chapter 4. Highway Safety

§ 402. Highway safety programs

Safe Routes to School Program

Pub.L. 109-59, Title I, § 1404, Aug. 10, 2005, 119 Stat. 1228, as amended Pub.L. 110-244, Title I, § 101(s)(2),

June 6, 2008, 122 Stat. 1577, provided that:

“(a) Establishment.--Subject to the requirements of this section [this note], the Secretary [of Transportation] shall establish and carry out a safe routes to school program for the benefit of children in primary and middle schools.

“(b) Purposes.--The purposes of the program shall be--

“(1) to enable and encourage children, including those with disabilities, to walk and bicycle to school;

“(2) to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and

“(3) to 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.

“(c) Apportionment of funds.--

“(1) In general.--Subject to paragraphs (2), (3), and (4), amounts made available to carry out this section [this note] for a fiscal year shall be apportioned among the States in the ratio that--

“(A) the total student enrollment in primary and middle schools in each State; bears to

“(B) the total student enrollment in primary and middle schools in all States.

“(2) Minimum apportionment.--No State shall receive an apportionment under this section [this note] for a fiscal year of less than \$1,000,000.

“(3) Set-aside for administrative expenses.--Before apportioning under this subsection amounts made available to carry out this section [this note] for a fiscal year, the Secretary [of Transportation] shall set aside not more than \$3,000,000 of such amounts for the administrative expenses of the Secretary in carrying out this subsection.

“(4) Determination of student enrollments.--Determinations under this subsection concerning student enrollments shall be made by the Secretary.

“(d) Administration of amounts.--Amounts apportioned to a State under this section [this note] shall be administered by the State's department of transportation.

“(e) Eligible recipients.--Amounts apportioned to a State under this section [this note] shall be used by the State to provide financial assistance to State, local, tribal, and regional agencies, including nonprofit organizations, that demonstrate an ability to meet the requirements of this section [this note].

“(f) Eligible projects and activities.--

“(1) Infrastructure-related projects.--

“(A) In general.--Amounts apportioned to a State under this section [this note] may be used for the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bicycle parking facilities, and traffic diversion improvements in the vicinity of schools.

“(B) Location of projects.--Infrastructure-related projects under subparagraph (A) may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

“(2) Noninfrastructure-related activities.--

“(A) In general.--In addition to projects described in paragraph (1), amounts apportioned to a State under this section [this note] may be used for noninfrastructure-related activities to encourage walking and bicycling to school, including public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and funding for training, volunteers, and managers of safe routes to school programs.

“(B) Allocation.--Not less than 10 percent and not more than 30 percent of the amount apportioned to a State under this section [this note] for a fiscal year shall be used for noninfrastructure-related activities under this subparagraph.

“(3) Safe routes to school coordinator.--Each State receiving an apportionment under this section [this note] for a fiscal year shall use a sufficient amount of the apportionment to fund a full-time position of coordinator of the State's safe routes to school program.

“(g) Clearinghouse.--

“(1) In general.--The Secretary [of Transportation] shall make grants to a national nonprofit organization engaged in promoting safe routes to schools to--

“(A) operate a national safe routes to school clearinghouse;

“(B) develop information and educational programs on safe routes to school; and

“(C) provide technical assistance and disseminate techniques and strategies used for successful safe routes to school programs.

“(2) Funding.--The Secretary shall carry out this subsection using amounts set aside for administrative expenses under subsection (c)(3) [of this note].

“(h) Task force.--

“(1) In general.--The Secretary [of Transportation] shall establish a national safe routes to school task force composed of leaders in health, transportation, and education, including representatives of appropriate Federal agencies, to study and develop a strategy for advancing safe routes to school programs nationwide.

“(2) Report.--Not later than March 31, 2006, the Secretary shall submit to Congress a report containing the results of the study conducted, and a description of the strategy developed, under paragraph (1) and information regarding the use of funds for infrastructure-related and noninfrastructure-related activities under paragraphs (1) and (2) of subsection (f) [of this note].

“(3) Funding.--The Secretary shall carry out this subsection using amounts set aside for administrative expenses under subsection (c)(3) [of this note].

“(i) Applicability of Title 23.--Funds made available to carry out this section [this note] shall be available for obligation in the same manner as if such funds were apportioned under chapter 1 of title 23, United States Code [23 U.S.C.A. § 101 et seq.]; except that such funds shall not be transferable and shall remain available until expended, and the Federal share of the cost of a project or activity under this section [this note] shall be 100 percent.

“(j) Treatment of projects.--Notwithstanding any other provision of law, projects assisted under this subsection shall be treated as projects on a Federal-aid system under chapter 1 of title 23, United States Code [23 U.S.C.A. § 101 et seq.].

“(k) Definitions.--In this section [this note], the following definitions apply:

“(1) In the vicinity of schools.--The term ‘in the vicinity of schools’ means, with respect to a school, the area within bicycling and walking distance of the school (approximately 2 miles).

“(2) Primary and middle schools.--The term ‘primary and middle schools’ means schools providing education from kindergarten through eighth grade.”

[For the purposes of apportioning funds under this section, relating to the safe routes to school program, term “State” to mean any of the 50 States and the District of Columbia, see Pub.L. 109-59, § 1120(c), set out as a note under 23 U.S.C.A. § 101.]

[Amendments to this note by Pub.L. 110-244, effective June 6, 2008, except that amendments made by Pub.L. 110-244 (other than amendments by Pub.L. 110-244, §§ 101(g), 101(m)(1)(H), 103, 105, 109, and 201(o) to 23 U.S.C.A. § 144, 23 U.S.C.A. § 101 note, and 49 U.S.C.A. § 5338 note), to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub.L. 109-59, 119 Stat. 1144, effective as of Aug. 10, 2005, and treated as being included in that Act as of Aug. 10, 2005, and each provision of Pub.L. 109-59, as in effect on the day before the date of enactment of Pub.L. 110-244, which was approved June 6, 2008, that is amended by Pub.L. 110-244, (other than amendments by Pub.L. 110-244, §§ 101(g), 101(m)(1)(H), 103, 105, 109, and 201(o) to 23 U.S.C.A. § 144, 23 U.S.C.A. § 101 note, and 49 U.S.C.A. § 5338 note) shall be treated as not being enacted, see Pub.L. 110-244, § 121, set out as a note under 23 U.S.C.A. § 101.]

23 U.S.C.A. § 402

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New York Transportation Law

Chapter 61A. Of the Consolidated Laws

Article 2. Powers, Duties and Jurisdiction of the Department of Transportation

§ 14. General functions, powers and duties of department

The department, by or through the commissioner or his duly authorized officer or employee, shall have the following general functions, powers and duties:

[...]

35. Within amounts appropriated therefor, to establish and administer a safe routes to school program, the purpose of which is to eliminate or reduce physical impediments to primary and secondary school-aged children walking or bicycling to school.

(a) The commissioner is hereby vested with the authority and responsibility to approve funding for projects authorized in paragraph (b) of this subdivision. The funding of projects will be made upon application, in a format prescribed by the commissioner, by the project sponsor for funding of prior expenditures. Provided, however, that nothing contained in this subdivision shall prohibit any project sponsor from submitting any project authorized by such paragraph (b) for consideration for federal funding within the process by which federal funds are obtained, and obtaining such funds.

(b) Safe routes to school projects shall be limited to project costs for the construction, reconstruction, enhancement, improvement, replacement, reconditioning, restoration, rehabilitation and preservation of crosswalks, sidewalks, bicycle lanes, and traffic calming measures where the service life of the project is at least ten years.

Funding of project expenditures for an approved project shall require certification from the project sponsor that:

(i) the project has a service life of ten or more years;

(ii) the project is located within two miles of a primary school or within three miles of a secondary school;

(iii) the amount of funds requested is no greater than prior unreimbursed municipal project expenditures for work completed or materials incorporated in qualifying projects; and

(iv) the amount of municipal funds appropriated for transportation capital projects by municipalities shall not be reduced because of the availability of these funds.

(c) The commissioner shall request the project sponsors to furnish such information in writing as may be necessary. By written agreement between them, a county may act for one or more cities, towns or villages in the implementation of projects eligible for funding pursuant to this subdivision. A copy of such agreement shall be filed with the commissioner.

(d) Consideration also shall be given to the demonstrated need of an applicant, the potential of the project to reduce child injuries and fatalities, and the potential of the project to reduce or eliminate hazardous conditions for pedestrians and/or bicyclists.

(e) For the purposes of this subdivision, "traffic calming measures" shall mean any physical engineering measure or measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users such as pedestrians and bicyclists.

CREDIT(S)

(L.1967, c. 717, § 27; amended L.1968, c. 420, §§ 310, 311; L.1969, c. 1065, §§ 2, 3; L.1970, c. 731, § 4; L.1972, c. 736, § 2; L.1972, c. 929, § 2; L.1973, c. 657, § 2; L.1974, c. 142, § 1; L.1977, c. 158, § 3; L.1978, c. 203, § 1; L.1979, c. 137, § 3; L.1980, c. 126, § 3; L.1981, c. 88, § 3; L.1982, c. 84, § 3; L.1983, c. 42, § 3; L.1984, c. 42, § 4; L.1984, c. 145, § 1; L.1990, c. 161, § 1; L.1992, c. 69, § 5; L.1993, c. 307, § 7; L.1993, c. 608, § 27; L.1995, c. 670, § 1; L.1996, c. 616, § 1; L.1998, c. 621, § 7, eff. Oct. 15, 1998; L.2000, c. 63, pt. I, § 8, eff. May 15, 2000; L.2004, c. 444, § 1, eff. April 1, 2005.)

McKinney's Transportation Law § 14, NY TRANS § 14

Current through L.2009, chapters 1 to 14 and 16 to 347.

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New York Education Law

Title I. General Provisions

Article 17. Instruction in Certain Subjects

§ 803-a. Courses of study in prevention of child abduction

1. All pupils in grades K-8 in all public schools in the state shall receive instruction designed to prevent the abduction of children. Such instruction shall be provided by or under the direct supervision of regular classroom teachers, provided, however, that such instruction may be provided by any other agency, public or private.
2. The commissioner, shall provide technical assistance to assist in the development of curricula for such courses of study which shall be age appropriate and developed according to the needs and abilities of pupils at successive grade levels in order to provide awareness skills, information, self-confidence and support to aid in the prevention of child abduction.
3. For purposes of developing such courses of study, the board of education or trustees of every school district may establish local advisory councils or utilize the school-based shared decision making and planning committee established pursuant to regulations of the commissioner to make recommendations concerning the content and implementation of such courses. School districts may alternatively utilize courses of instruction developed by consortia of school district, boards of cooperative educational services, other school districts or any other agency, public or private. Such advisory councils shall consist of, but not be limited to, parents, school trustees and board members, appropriate school personnel, business and community representatives, and law enforcement personnel having experience in the prevention of child abduction.

4. The board of education or trustees of every school district shall provide appropriate training and curriculum materials for the regular teachers who provide such instruction.

CREDIT(S)

(Added L.1994, c. 658, § 1.)

McKinney's Education Law § 803-a, NY EDUC § 803-a

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 806. Courses of instruction in highway safety and traffic regulation; school safety patrols

1. The regents of The University of the State of New York shall prescribe courses of instruction in highway safety and traffic regulation which shall include bicycle safety, to be maintained and followed in all the schools of the state. The boards of education and trustees of the several cities and school districts of the state shall require instruction to be given in such courses, by the teachers employed in the schools therein. All pupils attending such schools shall attend upon such instruction. Similar courses of instruction shall be prescribed and maintained in private schools in the state, and all pupils in such schools shall attend upon such courses. If such courses are not so established and maintained in a private school, attendance upon instruction in such school shall not be deemed substantially equivalent to instruction given to pupils of like grade in the public schools in the city or district in which such pupils reside.

2. The regents shall determine the subjects to be included in such courses of instruction in highway safety and traffic regulation including bicycle safety, and the period of instruction in each of the grades in such subjects. They shall adopt rules providing for attendance upon such instruction and for such other matters as are required for carrying into effect the teaching of the courses of instruction prescribed by this section. The commissioner of education shall be responsible for the enforcement of such section and shall cause to be inspected and supervise the instruction to be given in such subjects. The commissioner may, in his discretion, cause all or a portion of the public school money to be apportioned to a district or city to be withheld for failure of the school authorities of such district or city to provide instruction in such courses and to compel attendance upon such instruction, as herein prescribed, and for a noncompliance with the rules of the regents adopted as herein provided.

3. Any board of education or school district board is empowered to organize in the school over which it has control a school safety patrol and, with the written consent of the parents, to appoint pupils as members thereof for the purpose of influencing

and encouraging the safe use of highways and highway crossings and bicycles by the pupils of the school. Nothing herein contained shall be construed to authorize or permit the use of any safety patrol member for the purpose of directing vehicular traffic nor shall any safety patrol member be stationed in that portion of the highway intended for the use of vehicular traffic. Such patrol shall function only under the direction and control of the principal or teacher in charge of such school. No liability shall attach either to the school district or any individual, trustee, board member, superintendent, principal, teacher or other school authority by virtue of the organization, maintenance or operation of a school safety patrol organized, maintained and operated under authority of this section.

CREDIT(S)

(L.1947, c. 820; amended L.1973, c. 946, § 1.)

McKinney's Education Law § 806, NY EDUC § 806

Current through L.2009, chapters 1 to 14 and 16 to 347.

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Chapter 16. Of the Consolidated Laws

Title V. Taxation and Financial Administration

Article 73. Apportionment of Public Moneys

Part III. Transportation Services

§ 3635. Transportation

1. a. Sufficient transportation facilities (including the operation and maintenance of motor vehicles) shall be provided by the school district for all the children residing within the school district to and from the school they legally attend, who are in need of such transportation because of the remoteness of the school to the child or for the promotion of the best interest of such children. Such transportation shall be provided for all children attending grades kindergarten through eight who live more than two miles from the school which they legally attend and for all children attending grades nine through twelve who live more than three miles from the school which they legally attend and shall be provided for each such child up to a distance of fifteen miles, the distances in each case being measured by the nearest available route from home to school. The cost of providing such transportation between two or three miles, as the case may be, and fifteen miles shall be considered for the purposes of this chapter to be a charge upon the district and an ordinary contingent expense of the district. Transportation for a lesser distance than two miles in the case of children attending grades kindergarten through eight or three miles in the case of children attending grades nine through twelve and for a

greater distance than fifteen miles may be provided by the district, and, if provided, shall be offered equally to all children in like circumstances residing in the district; provided, however, that this requirement shall not apply to transportation offered pursuant to section thirty-six hundred thirty-five-b of this article.

b. (i) School districts providing transportation to a nonpublic school for pupils living within a specified distance from such school shall designate one or more public schools as centralized pick-up points and shall provide transportation between such points and such nonpublic schools for students residing in the district who live too far from such nonpublic schools to qualify for transportation between home and school. The district shall not be responsible for the provision of transportation for pupils between their home and such pick-up points. The district may provide school bus transportation to a pupil if the residence of the pupil is located on an established route for the transportation of pupils to the centralized pick-up point provided such transportation does not result in additional costs to the district. The cost of providing transportation between such pick-up points and such nonpublic schools shall be an ordinary contingent expense.

(ii) A board of education may, at its discretion, provide transportation for pupils residing within the district to a nonpublic school located more than fifteen miles from the home of any such pupil provided that such transportation has been provided to such nonpublic school pursuant to this subdivision in at least one of the immediately preceding three school years and such transportation is provided from one or more centralized pick-up points designated pursuant to this paragraph and that the distance from such pick-up points to the nonpublic school is not more than fifteen miles. The district shall not be responsible for the provision of transportation for pupils between pupils homes and such pick-up points. The cost of providing transportation between such pick-up points and such nonpublic schools shall be an ordinary contingent expense.

c. The foregoing provisions of this subdivision shall not require transportation to be provided for children residing within a city school district, but if provided by such district pursuant to other provisions of this chapter, such transportation shall be offered equally to all such children in like circumstances; provided further that in city school districts in cities having a population of one hundred twenty-five thousand inhabitants or less such transportation, if provided, shall be subject to the mileage limitations prescribed in paragraph a of this subdivision or such greater or lesser limitations as are approved by the board of education prior to July first, nineteen hundred ninety-six or as otherwise authorized in subdivision twelve of section twenty-five hundred three of this chapter. City school districts with a population of more than two hundred twenty-five thousand and less than three hundred thousand, according to the nineteen hundred eighty federal census, which elect to provide transportation shall do so in accord with the grade and distance provisions of this subdivision including transportation outside the city limits.

d. Nothing contained in this subdivision, however, shall be deemed to require a school district to furnish transportation to a child directly to or from his or her home.

e. In lieu of the transportation provided pursuant to the foregoing provisions of this subdivision, a board of education may, at its discretion, provide transportation to any child attending grades kindergarten through eight between the school such child legally attends and before-and/or-after-school child care locations. For the purposes of this subdivision, a before-and/or-after-school child care location shall mean a place, other than the child's home, where care for less than twenty-four hours a day is provided on a regular basis for a child who attends school within the school district, provided that such place is situated within the school district. This definition includes, but is not limited to, a variety of child care services such as day care centers, family day care homes and in-home care by non-relatives. Such transportation may be provided for children attending grades kindergarten through eight where the distance between the school they legally attend and before -and/or-after-school child care locations is more than two miles, and may be provided for up to a distance of fifteen miles, the distance in each case being measured by the nearest available route from before -and/or- after-school child care locations to the school they legally attend, except that transportation for a lesser distance than two miles or a greater distance than fifteen miles may be provided if transportation for such distances is provided to students between home and school. Where a child receives transportation from a before-school child care location to the school he or she legally attends, such child shall be entitled to receive transportation from the school he or she legally attends to his or her home or to an after-school child care location in accordance with this subdivision. Where a child receives transportation from the school he or she legally attends to an after-school child care location, such child shall be entitled to receive transportation from home to the school he or she legally attends in accordance with this subdivision. Transportation may be provided to any child attending grades kindergarten through eight between the school the child legally attends and before -and/or- after-school child care locations upon written request of the parent or legal guardian submitted not later than the first day of April preceding the next school year, provided, however, a parent or guardian of a child not residing in the district on such date shall submit a written request within thirty days after establishing residence in the district and provided further that in order to be considered eligible for such transportation in the nineteen hundred eighty-seven-eighty-eight school year, such request must be submitted by August first, nineteen hundred eighty-seven. The provision of transportation to or from before-and/or-after-school child care locations, if provided, shall be offered equally to all children in like circumstances residing in the district, provided that a board of education furnishing transportation pursuant to this paragraph may limit the provision of such transportation to child care locations located within the attendance zone of the school the child attends, and to child day care centers and school age child care programs licensed or registered pursuant to section three hundred ninety of the social services law located anywhere within the school district. The cost of providing such transportation between two or three miles, as

the case may be, and fifteen miles shall be considered for the purposes of this chapter to be a charge upon the district. Such substitute transportation expense shall be eligible for state aid in accordance with clause one of paragraph b of subdivision seven of section thirty-six hundred two of this chapter. Nothing in this subdivision shall be construed to impose a duty upon boards of education to provide transportation to or from before-and/or-after-school child care locations. Nothing in this subdivision shall be construed to authorize boards of education to provide to any child transportation between a before -and/or- after-school day care location and that child's home.

f. A board of education may, in its discretion, provide transportation pursuant to this subdivision to a child of less than school age residing within the school district to and from the school which his or her parent legally attends; provided that such child is accompanied by such parent, that such parent is under twenty-one years of age and has not received a high school diploma, and that such transportation is furnished for the purpose of allowing the child to receive child care services and/or attend a nursery school, pre-school, or parenting program. For all purposes under this chapter, a child receiving such transportation shall be deemed a pupil legally attending the school which his or her parent legally attends. The cost of providing such transportation shall be considered for the purposes of this chapter to be a charge upon the district and an ordinary contingent expense of the district. Such transportation expense shall be eligible for state aid in accordance with subparagraph (i) of paragraph b of subdivision seven of section thirty-six hundred two of this article.

CREDIT(S)

(L.1947, c. 820; amended L.1951, c. 609; L.1960, c. 1074; L.1961, c. 959; L.1974, c. 755, § 1; L.1978, c. 453, § 1; L.1978, c. 719, § 1; L.1979, c. 670, § 1; L.1981, c. 960, § 1; L.1984, c. 53, § 44; L.1985, c. 902, § 1; L.1986, c. 683, § 22; L.1987, c. 53, § 40; L.1989, c. 653, § 1; L.1990, c. 53, § 49-c; L.1990, c. 665, § 1; L.1990, c. 718, § 1; L.1992, c. 69, § 3; L.1994, c. 545, § 2; L.1994, c. 571, § 1; L.1996, c. 171, § 20; L.1996, c. 474, §§ 91, 92; L.1997, c. 34, § 1; L.1999, c. 129, § 1, eff. July 1, 1999; L.2005, c. 424, § 1, eff. Sept. 1, 2005.)

McKinney's Education Law § 3635, NY EDUC § 3635

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New York General Municipal Law

Chapter 24. Of the Consolidated Laws

Article 9. Regulation of Use of Bicycles and Similar Vehicles

§ 180. Ordinances to regulate use of bicycles

The governing boards of municipal corporations as defined in section two of this chapter, may adopt local laws to regulate the use of bicycles on the public highways, streets, avenues, walks, parks and public places within their limits. Such local laws shall be supplemental and in addition to the provisions of the vehicle and traffic law relating to vehicles and not in conflict therewith. Provided further that such local laws shall not impose any charge, tax or otherwise not provide for the free use of bicycles and tricycles.

CREDIT(S)

(L.1909, c. 29; amended L.1941, c. 593, §§ 1, 2; L.1958, c. 42, § 1; L.1975, c. 860, § 10; L.2004, c. 668, § 3, eff. Oct. 26, 2004.)

McKinney's General Municipal Law § 180, NY GEN MUN § 180

Current through L.2009, chapters 1 to 14 and 16 to 347.

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Article 10. Firemen and Policemen

§ 208-a. School guards

The duly constituted authorities of any city, town, or village or any county police department or police district may designate, authorize and appoint such a number of persons as such authority shall deem necessary, and at such salaries as such authority shall deem advisable, as school crossing guards to aid in protecting school children going to and from school, and church crossing guards to aid in protecting persons going to and from places of worship, and for such purpose shall have power to control vehicular traffic within such municipality.

CREDIT(S)

(Added L.1956, c. 255, § 1, eff. April 3, 1956; amended L.1957, c. 784, § 1; L.1960, c. 552, § 1; L.1967, c. 131, § 1.)

McKinney's General Municipal Law § 208-a, NY GEN MUN § 208-a

Current through L.2009, chapters 1 to 14 and 16 to 347.

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New York Town Law

Chapter 62. Of the Consolidated Laws

Article 9. Ordinances and Licenses

§ 130. Town ordinances

The town board after a public hearing may enact, amend and repeal ordinances, rules and regulations not inconsistent with law, for the following purposes in addition to such other purposes as may be contemplated by the provisions of this chapter or other laws. In order to accomplish the regulation and control of such purposes, the town board may include in any such ordinance, rule or regulation provision for the issuance and revocation of a permit or permits, for the appointment of any town officers or employees to enforce such ordinance, rule or regulation and/or the terms and conditions of any permit issued thereunder, and for the collection of any reasonable uniform fee in connection therewith. The town clerk shall give notice of such hearing by the publication of a notice in at least one newspaper circulating in the town, specifying the time when and the place where such hearing will be held, and in general terms describing the proposed ordinance. Such notice shall be published once at least ten days prior to the day specified for such hearing.

[...]

4. Sidewalks. Regulating the manner of construction, reconstruction and repair of sidewalks, the materials to be used, the grades and the widths thereof and prohibiting any construction, reconstruction or repair which does not comply with such regulations; requiring the owner and occupant of premises abutting on any street where a sidewalk has been laid, to keep the sidewalk in front of such premises, free and clear from snow, ice, dirt and other obstructions and upon default thereof provide for the removal thereof at the expense of the owners of such premises and that such charge shall become a lien upon the premises benefited thereby, until paid.

[...]

7. Use of streets, highways, sidewalks and public places. (a) Regulating the use of streets, highways, sidewalks and public places by pedestrians, animals, motor and other vehicles, including local and interurban street cars; restricting parking of all vehicles therein; regulating parades and public assemblages therein; regulating or prohibiting coasting therein; and, subject to the approval of the department of transportation, requiring railroad companies to employ and maintain competent flagmen and erect gates at any street or highway crossing; prohibiting the deposit of any dirt, filth, waste or rubbish in any street, highway, sidewalk, that part of any waterway within its jurisdiction or public place or incumbering thereof by any encroachment of buildings, structures, excavation or otherwise; regulating the manner in which excavation may be made in or under the streets, highways, sidewalks or public places and requiring an indemnity bond as a condition precedent thereto or the town board may require as the condition precedent thereto, the deposit in cash of such an amount as the board may determine necessary to cover the probable expense to the town of the replacement by the town

of the street, highway, sidewalk or public place, and the unexpended balance, if any, shall be refunded to the depositor; providing for the removal of snow and ice therefrom; prohibiting the use by owners and occupants of property abutting on public streets or grounds of barbed wire or similar fences along the boundaries of such street or grounds.

CREDIT(S)

(L.1932, c. 634; amended L.1935, cc. 432, 464, 500, 881; L.1937, c. 495, § 7; L.1938, cc. 309, 402, 646; L.1939, c. 273, § 2; L.1939, c. 338, § 1; L.1939, c. 581, § 1; L.1940, c. 474; L.1941, c. 30, § 7; L.1941, c. 674, § 1; L.1942, c. 85, § 14; L.1942, c. 639, § 1; L.1943, cc. 388, 389, § 1; L.1944, c. 67; L.1944, c. 126, §§ 1 to 9; L.1944, c. 447, §§ 1, 2; L.1946, c. 12, §§ 1, 2; L.1946, c. 21; L.1946, c. 217, § 1; L.1947, cc. 361, 817; L.1948, c. 657; L.1949, c. 371; L.1950, c. 173; L.1950, c. 598; L.1952, cc. 256, 691; L.1953, cc. 120, 578, 579; L.1954, c. 265; L.1955, cc. 111, 396, 465; L.1956, c. 503, § 3; L.1956, c. 575; L.1957, cc. 135, 154, 726; L.1957, c. 925, § 1; L.1959, c. 98; L.1959, c. 832, § 1; L.1959, c. 875; L.1960, c. 796; L.1960, c. 874; L.1962, c. 510; L.1963, c. 230, § 4; L.1963, c. 231; L.1963, c. 551; L.1963, c. 980; L.1964, c. 619; L.1965, c. 551, §§ 1, 2; L.1966, c. 376; L.1966, c. 939, § 2; L.1967, c. 528; L.1968, c. 820; L.1969, c. 345; L.1969, cc. 420, 421; L.1970, c. 344; L.1970, c. 662; L.1970, c. 777, § 1; L.1971, c. 169; L.1971, c. 1074; L.1972, c. 180, §§ 1 to 3; L.1972, c. 821, § 1; L.1973, c. 262, § 1; L.1973, c. 272, § 1; L.1974, c. 292, § 1; L.1975, c. 160, § 1; L.1975, c. 282, § 1; L.1976, c. 316, § 1; L.1977, c. 395, § 1; L.1978, c. 731, § 2; L.1979, c. 159, § 1; L.1980, c. 520, § 1; L.1982, c. 355, § 1; L.1985, c. 171, § 1; L.1986, c. 194, § 3; L.1989, c. 508, § 1; L.1990, c. 456, § 1; L.1993, c. 605, §§ 3, 4; L.1994, c. 660, § 2; L.1995, c. 567, § 1; L.1995, c. 688, § 2; L.2000, c. 415, § 2, eff. Oct. 31, 2000; L.2001, c. 490, § 2, eff. Nov. 21, 2001; L.2003, c. 296, § 3, eff. Jan. 1, 2005)

McKinney's Town Law § 130, NY TOWN § 130

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New York Vehicle and Traffic Law

Chapter 71. Of the Consolidated Laws

Title VII. Rules of the Road

Article 24. Traffic Signs, Signals and Markings

§ 1111. Traffic-control signal indications

Whenever traffic is controlled by traffic-control signals, other than lane direction control signal indications provided in section eleven hundred sixteen, exhibiting different colored lights, or colored lighted arrows, successively, one at a time or in combination, only the colors green, yellow and red shall be used, and said light shall indicate and apply to drivers of vehicles and to pedestrians as follows:

(a) Green indications:

1. Traffic, except pedestrians, facing a steady circular green signal may proceed straight through or turn right or left unless a sign at such place prohibits either such turn. Such traffic, including when turning right or left, shall yield the right of way to other traffic lawfully within the intersection or an adjacent crosswalk at the time such signal is exhibited.
2. Traffic, except pedestrians, facing a steady green arrow signal may cautiously enter the intersection only to make the movement indicated by such arrow, or such other movement as is permitted by other indications shown at the same time, except that a U-Turn may be made by traffic facing a left green arrow signal unless a sign prohibits such U-Turn or such U-Turn is in violation of any other provision of law. Such traffic shall yield the right of way to other traffic lawfully within the intersection or an adjacent cross walk at the time such signal is exhibited.
3. Unless otherwise directed by a pedestrian-control signal as provided in section eleven hundred twelve, pedestrians facing any steady green signal, except when the sole green signal is a turn arrow, may proceed across the roadway within any marked or unmarked crosswalk.

(b) Yellow indications:

1. Traffic, except pedestrians, facing a steady circular yellow signal may enter the intersection; however, said traffic is thereby warned that the related green movement is being terminated or that a red indication will be exhibited immediately thereafter.
2. Traffic, except pedestrians, facing a steady yellow arrow signal may cautiously enter the intersection only to complete the movement indicated by such arrow or make such other movement as is permitted by other indications shown at the same time; however, said traffic is thereby warned that the related green arrow movement is being terminated or that a red indication will be exhibited immediately thereafter.
3. Unless otherwise directed by a pedestrian-control signal as provided in section eleven hundred twelve, pedestrians facing any steady yellow signal are thereby advised that there is insufficient time to cross the roadway before a red indication is shown and no pedestrian shall then start to cross the roadway.

[(c) Repealed.]

(d) Red indications:

1. Traffic, except pedestrians, facing a steady circular red signal, unless to make such other movement as is permitted by other indications shown at the same time, shall stop at a clearly marked stop line, but if none, then shall stop before entering the

crosswalk on the near side of the intersection, or in the event there is no crosswalk, at the point nearest the intersecting roadway where the driver has a view of the approaching traffic on the intersecting roadway before entering the intersection and shall remain standing until an indication to proceed is shown except as provided in paragraph two of this subdivision.

2. Except in a city having a population of one million or more, unless a sign is in place prohibiting such turn:

a. Traffic facing a steady circular red signal may cautiously enter the intersection to make a right turn after stopping as required by paragraph one of this subdivision, except that right turning traffic is not required to stop when a steady right green arrow signal is shown at the same time. Such traffic shall yield the right-of-way to pedestrians within a marked or unmarked crosswalk at the intersection and to other traffic lawfully using the intersection;

b. Traffic, while on a one-way roadway, facing a steady red signal may cautiously enter the intersection to make a left turn onto a one-way roadway after stopping as required by paragraph one of this subdivision. Such traffic shall yield the right-of-way to pedestrians within a marked or unmarked crosswalk at the intersection and to other traffic lawfully using the intersection.

c. On or after the effective date of this subparagraph, the sign which prohibits such turn shall be prominently displayed from all newly installed traffic signals where possible.

Notwithstanding any other provision of law, any city having a population of one million or more, is hereby authorized and empowered to adopt a local law authorizing subparagraph a or b of this paragraph to be applicable within such city. Upon the adoption of such local law the exception provided herein for a city having a population of one million or more shall no longer be applicable within such city.

3. Traffic, except pedestrians, facing a steady red arrow signal may not enter the intersection to make the movement indicated by such arrow and, unless entering the intersection to make such other movement as is permitted by other indications shown at the same time, shall stop at a clearly marked stop line, but if none, then shall stop before entering the crosswalk on the near side of the intersection, or in the event there is no crosswalk at the point nearest the intersecting roadway where the driver has a view of the approaching traffic on the intersecting roadway before entering the intersection and shall remain standing until an indication to proceed is shown.

4. Unless otherwise directed by a pedestrian-control signal as provided in section eleven hundred twelve, pedestrians facing any steady red signal shall not enter the roadway.

5. Notwithstanding the provision of paragraph two of this subdivision, no school bus, while transporting pupils for any purpose, shall be permitted to proceed when facing a steady red signal.

(e) Traffic shall obey signs requiring obedience to traffic-control signals at intersections other than those at which such signals are located. No intersection not controlled by such signs prior to the effective date of this section shall hereafter be made subject to such method of control and no ordinance, order, rule or regulation requiring such obedience shall hereafter be adopted.

(f) In the event an official traffic-control signal is erected and maintained at a place other than an intersection, the provisions of this section shall be applicable except as to those provisions which by their nature can have no application. Any stop required shall be made at a sign or marking on the pavement indicating where the stop shall be made, but in the absence of any such sign or marking the stop shall be made at the signal.

CREDIT(S)

(L.1959, c. 775; amended L.1961, c. 489, § 1; L.1964, c. 653, § 4; L.1966, c. 170; L.1971, c. 356, § 1; L.1974, c. 760, §§ 1 to 3; L.1976, c. 948, § 2; L.1980, c. 230, § 1; L.1980, c. 420, § 1; L.1981, c. 278, § 1; L.1981, c. 286, § 1; L.1984, c. 269, § 1; L.1997, c. 317, § 1, eff. Jan. 1, 1998.)

McKinney's Vehicle and Traffic Law § 1111, NY VEH & TRAF § 1111

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1112. Pedestrian-control signal indications

Whenever pedestrians are controlled by pedestrian-control signals exhibiting the words "WALK" or "DON'T WALK", or exhibiting symbols of a walking person or upraised hand, such signals shall indicate and apply to pedestrians as follows:

(a) Steady WALK or walking person. Pedestrians facing such signal may proceed across the roadway in the direction of the signal and shall be given the right of way by other traffic.

(b) Flashing DON'T WALK or upraised hand. No pedestrian shall start to cross the roadway in the direction of such signal, but any pedestrians who have partially completed their crossing on the WALK or walking person signal shall proceed to a sidewalk or safety island while the flashing DON'T WALK or upraised hand signal is showing.

(c) Steady DON'T WALK or upraised hand. No pedestrians shall start to cross the roadway in the direction of such signal, but any pedestrians who have partially completed their crossing on the WALK or flashing DON'T WALK signal shall proceed to a sidewalk or safety island while the steady DON'T WALK signal is showing.

CREDIT(S)

(L.1959, c. 775; amended L.1971, c. 356, § 2; L.1987, c. 228, § 1.)

McKinney's Vehicle and Traffic Law § 1112, NY VEH & TRAF § 1112

Current through L.2009, chapters 1 to 14 and 16 to 347.

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Article 27. Pedestrians' Rights and Duties

§ 1150. Pedestrians subject to traffic regulations

Pedestrians shall be subject to traffic-control signals as provided in section eleven hundred eleven of this title, but at all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this article.

CREDIT(S)

(L.1959, c. 775.)

McKinney's Vehicle and Traffic Law § 1150, NY VEH & TRAF § 1150

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1151. Pedestrians' right of way in crosswalks

(a) When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right of way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk on the roadway upon which the vehicle is traveling, except that any pedestrian crossing a roadway at a point where a pedestrian tunnel or overpass has been provided shall yield the right of way to all vehicles.

(b) No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impractical for the driver to yield.

(c) Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver

of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

CREDIT(S)

(L.1959, c. 775; amended L.2002, c. 159, § 1, eff. Jan. 19, 2003.)

McKinney's Vehicle and Traffic Law § 1151, NY VEH & TRAF § 1151

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1151-a. Pedestrians' right of way on sidewalks

The driver of a vehicle emerging from or entering an alleyway, building, private road or driveway shall yield the right of way to any pedestrian approaching on any sidewalk extending across such alleyway, building entrance, road or driveway.

CREDIT(S)

(Added L.1970, c. 603, § 2.)

McKinney's Vehicle and Traffic Law § 1151-a, NY VEH & TRAF § 1151-a

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1152. Crossing at other than crosswalks

(a) Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right of way to all vehicles upon the roadway.

(b) Any pedestrian crossing a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right of way to all vehicles upon the roadway.

(c) No pedestrian shall cross a roadway intersection diagonally unless authorized by official traffic-control devices; and, when authorized to cross diagonally, pedestrians shall cross only in accordance with the official traffic-control devices pertaining to such crossing movements.

CREDIT(S)

(L.1959, c. 775; amended L.1964, c. 653, § 12.)

McKinney's Vehicle and Traffic Law § 1152, NY VEH & TRAF § 1152

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1153. Provisions relating to blind or visually impaired persons

(a) Notwithstanding the foregoing provisions of this article every driver of a vehicle approaching an intersection or crosswalk shall yield the right of way to a pedestrian crossing or attempting to cross the roadway when such pedestrian is accompanied by a guide dog or using a cane which is metallic or white in color or white with a red tip.

(b) No person, unless blind or visually impaired, shall use on any street or highway a cane which is metallic or white in color or white with a red tip.

(c) This section shall not be construed as making obligatory the employment of the use of a guide dog or of a cane or walking stick of any kind by a person blind or visually impaired.

CREDIT(S)

(L.1959, c. 775; amended L.1973, c. 494, § 1; L.1986, c. 302, § 1.)

McKinney's Vehicle and Traffic Law § 1153, NY VEH & TRAF § 1153

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[§ 1154. Repealed. L.1984, c. 429, § 2, eff. Aug. 18, 1984]

§ 1155. Pedestrians to use right half of crosswalks

Pedestrians shall move, whenever practicable, upon the right half of crosswalks.

CREDIT(S)

(L.1959, c. 775.)

McKinney's Vehicle and Traffic Law § 1155, NY VEH & TRAF § 1155

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1156. Pedestrians on roadways

(a) Where sidewalks are provided and they may be used with safety it shall be unlawful for any pedestrian to walk along and upon an adjacent roadway.

(b) Where sidewalks are not provided any pedestrian walking along and upon a highway shall when practicable walk only on the left side of the roadway or its shoulder facing traffic which may approach from the opposite direction. Upon the approach of any vehicle from the opposite direction, such pedestrian shall move as far to the left as is practicable.

CREDIT(S)

(L.1959, c. 775.)

McKinney's Vehicle and Traffic Law § 1156, NY VEH & TRAF § 1156

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§ 1157. Pedestrians soliciting rides, or business

(a) No person shall stand in a roadway for the purpose of soliciting a ride, or to solicit from or sell to an occupant of any vehicle.

(b) No person shall stand on or in proximity to a street or highway for the purpose of soliciting the watching or guarding of any vehicle while parked or about to be parked on a street or highway.

(c) No person shall occupy any part of a state highway, except in a city or village, in any manner for the purpose of selling or soliciting.

CREDIT(S)

(L.1959, c. 775; amended L.1967, c. 510.)

McKinney's Vehicle and Traffic Law § 1157, NY VEH & TRAF § 1157

Current through L.2009, chapters 1 to 14 and 16 to 347.

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Article 34. Operation of Bicycles and Play Devices

§ 1230. Effect of regulations

(a) The parent of any child and the guardian of any ward shall not authorize or knowingly permit any such child or ward to violate any of the provisions of this article.

(b) These regulations applicable to bicycles or to in-line skates shall apply whenever a bicycle is, or in-line skates are, operated upon any highway, upon private roads open to public motor vehicle traffic and upon any path set aside for the exclusive use of bicycles, or in-line skates, or both.

CREDIT(S)

(L.1959, c. 775; amended L.1995, c. 694, § 6.)

McKinney's Vehicle and Traffic Law § 1230, NY VEH & TRAF § 1230

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1231. Traffic laws apply to persons riding bicycles or skating or gliding on in-line skates

Every person riding a bicycle or skating or gliding on in-line skates upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this title, except as to special regulations in this article and except as to those provisions of this title which by their nature can have no application.

CREDIT(S)

(L.1959, c. 775; amended L.1995, c. 694, § 7.)

McKinney's Vehicle and Traffic Law § 1231, NY VEH & TRAF § 1231

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1232. Riding on bicycles

(a) A person propelling a bicycle shall not ride other than upon or astride a permanent and regular seat attached thereto, nor shall he ride with his feet removed from the pedals.

(b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped.

CREDIT(S)

(L.1959, c. 775.)

McKinney's Vehicle and Traffic Law § 1232, NY VEH & TRAF § 1232

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1233. Clinging to vehicles

1. No person riding upon any bicycle, coaster, in-line skates, roller skates, skate board, sled, or toy vehicle shall attach the same or himself or herself to any vehicle being operated upon a roadway.

2. No person shall ride on or attach himself to the outside of any vehicle being operated upon a roadway.

The provisions of this section shall not apply to:

(i) vehicles in an emergency operation as defined in section one hundred fourteen-b of this chapter; and

(ii) farm type tractors used exclusively for agricultural purposes or other farm equipment; and

(iii) riding on the open, uncovered cargo area of a truck with the permission of the operator of such truck; and

(iv) vehicles employed by a municipality for local garbage collection; and

(v) vehicles participating in a parade pursuant to a municipal permit.

3. No vehicle operator shall knowingly permit any person to attach any device or himself to such operator's vehicle in violation of subdivision one or subdivision two of this section.

CREDIT(S)

(L.1959, c. 775; amended L.1968, c. 330; L.1969, c. 604; L.1980, c. 377, § 1; L.1995, c. 694, § 8; L.2004, c. 703, § 2, eff. Jan. 1, 2005.)

McKinney's Vehicle and Traffic Law § 1233, NY VEH & TRAF § 1233

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1234. Riding on roadways, shoulders, bicycle or in-line skate lanes and bicycle or in-line skate paths

(a) Upon all roadways, any bicycle or in-line skate shall be driven either on a usable bicycle or in-line skate lane or, if a usable bicycle or in-line skate lane has not been

provided, near the right-hand curb or edge of the roadway or upon a usable right-hand shoulder in such a manner as to prevent undue interference with the flow of traffic except when preparing for a left turn or when reasonably necessary to avoid conditions that would make it unsafe to continue along near the right-hand curb or edge. Conditions to be taken into consideration include, but are not limited to, fixed or moving objects, vehicles, bicycles, in-line skates, pedestrians, animals, surface hazards or traffic lanes too narrow for a bicycle or person on in-line skates and a vehicle to travel safely side-by-side within the lane.

(b) Persons riding bicycles or skating or gliding on in-line skates upon a roadway shall not ride more than two abreast. Persons riding bicycles or skating or gliding on in-line skates upon a shoulder, bicycle or in-line skate lane, or bicycle or in-line skates [FN1] path, intended for the use of bicycles or in-line skates may ride two or more abreast if sufficient space is available, except that when passing a vehicle, bicycle or person on in-line skates, or pedestrian, standing or proceeding along such shoulder, lane or path, persons riding bicycles or skating or gliding on in-line skates shall ride, skate, or glide single file. Persons riding bicycles or skating or gliding on in-line skates upon a roadway shall ride, skate, or glide single file when being overtaken by a vehicle.

(c) Any person operating a bicycle or skating or gliding on in-line skates who is entering the roadway from a private road, driveway, alley or over a curb shall come to a full stop before entering the roadway.

CREDIT(S)

(L.1959, c. 775; amended L.1975, c. 860, § 4; L.1976, c. 149, § 1; L.1983, c. 257, §§ 1, 2; L.1988, c. 123, § 3; L.1995, c. 694, § 9; L.1996, c. 16, § 6.)

[FN1] So in original. Probably should be "skate".

McKinney's Vehicle and Traffic Law § 1234, NY VEH & TRAF § 1234

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1235. Carrying articles

No person operating a bicycle shall carry any package, bundle, or article which prevents the driver from keeping at least one hand upon the handle bars. No person skating or gliding on in-line skates shall carry any package, bundle, or article which obstructs his or her vision in any direction. No person operating a skate board shall carry any package, bundle, or article which obstructs his or her vision in any direction.

CREDIT(S)

(L.1959, c. 775; amended L.1995, c. 694, § 10; L.2004, c. 703, § 3, eff. Jan. 1, 2005.)

McKinney's Vehicle and Traffic Law § 1235, NY VEH & TRAF § 1235

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1236. Lamps and other equipment on bicycles

(a) [Eff. until Nov. 1, 2009. See, also, subd. (a) below.] Every bicycle when in use during the period from one-half hour after sunset to one-half hour before sunrise shall be equipped with a lamp on the front which shall emit a white light visible during hours of darkness from a distance of at least five hundred feet to the front and with a red light visible to the rear for three hundred feet. Effective July first, nineteen hundred seventy-six, at least one of these lights shall be visible for two hundred feet from each side.

(a) [Eff. Nov. 1, 2009. See, also, subd. (a) above.] Every bicycle when in use during the period from one-half hour after sunset to one-half hour before sunrise shall be equipped with a lamp on the front which shall emit a white light visible during hours of darkness from a distance of at least five hundred feet to the front and with a red or amber light visible to the rear for three hundred feet. Effective July first, nineteen hundred seventy-six, at least one of these lights shall be visible for two hundred feet from each side.

(b) No person shall operate a bicycle unless it is equipped with a bell or other device capable of giving a signal audible for a distance of at least one hundred feet, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

(c) Every bicycle shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement.

(d) Every new bicycle shall be equipped with reflective tires or, alternately, a reflex reflector mounted on the spokes of each wheel, said tires and reflectors to be of types approved by the commissioner. The reflex reflector mounted on the front wheel shall be colorless or amber, and the reflex reflector mounted on the rear wheel shall be colorless or red.

(e) Every bicycle when in use during the period from one-half hour after sunset to one-half hour before sunrise shall be equipped with reflective devices or material meeting the standards established by rules and regulations promulgated by the commissioner; provided, however, that such standards shall not be inconsistent with or otherwise conflict with the requirements of subdivisions (a) and (d) of this section.

CREDIT(S)

(L.1959, c. 775; amended L.1965, c. 172; L.1972, c. 848, § 1; L.1973, c. 447, § 1; L.1975, c. 860, § 5; L.1976, c. 887, §§ 1, 2; L.2009, c. 16, § 1, eff. Nov. 1, 2009.)

McKinney's Vehicle and Traffic Law § 1236, NY VEH & TRAF § 1236

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1237. Method of giving hand and arm signals by bicyclists

All signals herein required to be given by bicyclists by hand and arm shall be given in the following manner and such signals shall indicate as follows:

1. Left turn. Left hand and arm extended horizontally.
2. Right turn. Left hand and arm extended upward or right hand and arm extended horizontally.
3. Stop or decrease speed. Left hand and arm extended downward.

CREDIT(S)

(Added L.1989, c. 145, § 1.)

McKinney's Vehicle and Traffic Law § 1237, NY VEH & TRAF § 1237

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1238. Passengers on bicycles under one year of age prohibited; passengers and operators under fourteen years of age to wear protective headgear

1. No person operating a bicycle shall allow a person who is under one year of age to ride as a passenger on a bicycle nor shall such person be carried in a pack fastened to the operator. A first violation of the provisions of this sub-division shall result in no fine. A second violation shall result in a civil fine not to exceed fifty dollars.
2. No person operating a bicycle shall allow a person one or more years of age and less than five years of age to ride as a passenger on a bicycle unless:
 - (a) such passenger is wearing a helmet meeting standards established by the commissioner. For the purposes of this subdivision wearing a helmet means having a helmet of good fit fastened securely upon the head with the helmet straps; and

(b) such passenger is placed in a separate seat attached to the bicycle and such seat shall have adequate provision for retaining the passenger in place and for protecting the passenger from the moving parts of the bicycle.

2-a. The commissioner shall promulgate rules and regulations establishing standards for helmets required to be worn while bicycling, in-line skating, or operating a skate board. Such standards, to the extent practicable, shall reflect the standards recommended by the Snell Memorial Foundation, Safety Equipment Institute, or United States Consumer Product Safety Commission.

3. Any person who violates the provisions of subdivision two of this section shall pay a civil fine not to exceed fifty dollars.

4. The court shall waive any fine for which a person who violates the provisions of paragraph (a) of subdivision two of this section would be liable if such person supplies the court with proof that between the date of violation and the appearance date for such violation such person purchased or rented a helmet, which meets the requirements of paragraph (a) of subdivision two of this section. Further, the court shall waive any fine for which a person who violates the provisions of paragraph (b) of subdivision two of this section would be liable if such person supplies the court with proof that between the date of violation and the appearance date for such violation such person purchased or rented a seat which meets the requirements of paragraph (b) of subdivision two of this section. The court may waive any fine for which a person who violates the provisions of subdivision two of this section would be liable if the court finds that due to reasons of economic hardship such person was unable to purchase a helmet or seat. Such waiver of fine shall not apply to a second or subsequent conviction under paragraph (a) or (b) of subdivision two of this section.

5. (a) No person operating a bicycle shall allow a person five or more years of age and less than fourteen years of age to ride as a passenger on a bicycle unless such passenger is wearing a helmet meeting standards established by the commissioner.

(b) No person, one or more years of age and less than fourteen years of age, shall operate a bicycle unless such person is wearing a helmet meeting standards established by the commissioner.

(c) For the purposes of this subdivision wearing a helmet means having a helmet of good fit fastened securely upon the head with the helmet straps.

5-a. No person, one or more years of age and less than fourteen years of age, shall skate or glide on in-line skates or a skate board unless such person is wearing a helmet meeting standards established by the commissioner. For the purposes of this subdivision, wearing a helmet means having a helmet of good fit fastened securely on the head of such wearer with the helmet straps securely fastened.

5-b. No person less than fourteen years of age shall ride upon, propel or otherwise operate a two-wheeled vehicle commonly called a scooter unless such person is wearing a helmet meeting standards established by the commissioner. As used in this subdivision, wearing a helmet means having a properly fitting helmet fixed securely on the head of such wearer with the helmet straps securely fastened.

6. (a) Any person who violates the provisions of subdivision five, five-a or five-b of this section shall pay a civil fine not to exceed fifty dollars.

(b) The court shall waive any fine for which a person who violates the provisions of subdivision five of this section would be liable if such person supplies the court with proof that between the date of violation and the appearance date for such violation such person purchased or rented a helmet.

(c) The court may waive any fine for which a person who violates the provisions of subdivision five, five-a, or five-b of this section would be liable if the court finds that due to reasons of economic hardship such person was unable to purchase a helmet or due to such economic hardship such person was unable to obtain a helmet from the state-wide in-line skate and bicycle helmet distribution program, as established in section two hundred six of the public health law, or a local distribution program.

7. The failure of any person to comply with the provisions of this section shall not constitute contributory negligence or assumption of risk, and shall not in any way bar, preclude or foreclose an action for personal injury or wrongful death by or on behalf of such person, nor in any way diminish or reduce the damages recoverable in any such action.

8. A police officer shall only issue a summons for a violation of subdivision two, five, or five-a of this section by a person less than fourteen years of age to the parent or guardian of such person if the violation by such person occurs in the presence of such person's parent or guardian and where such parent or guardian is eighteen years of age or more. Such summons shall only be issued to such parent or guardian, and shall not be issued to the person less than fourteen years of age.

9. Subdivisions five, five-a, five-b, and six of this section shall not be applicable to any county, city, town or village that has enacted a local law or ordinance prior to the effective date of this subdivision that prohibits a person who is one or more years of age and less than fourteen years of age from operating a bicycle or skating or gliding on in-line skates or a skate board without wearing a bicycle helmet meeting the standards of the American National Standards Institute (Ansi Z 90.4 bicycle helmet standards), the Snell Memorial Foundation's Standards for Protective Headgear for use in Bicycling, or the American Society of Testing and Materials (ASTM) bike helmet standards, or that prohibits a person operating a bicycle from allowing a person five or more years of age and less than fourteen years of age to ride as a passenger on a bicycle unless such passenger is wearing a bicycle helmet that meets such standards. The failure of any person to comply with any such local

law or ordinance shall not constitute contributory negligence or assumption of risk, and shall not in any way bar, preclude or foreclose an action for personal injury or wrongful death by or on behalf of such person, nor in any way diminish or reduce the damages recoverable in any such action. The legislative body of a county, city, town or village may enact a local law or ordinance that prohibits a person who is fourteen or more years of age from skating or gliding on in-line skates, operating a skate board, or operating or riding as a passenger on a bicycle without wearing a bicycle helmet.

10. No person shall skate or glide on in-line skates or a skate board outside during the period of time between one-half hour after sunset and one-half hour before sunrise unless such person is wearing readily visible reflective clothing or material which is of a light or bright color.

CREDIT(S)

(Added L.1989, c. 343, § 1; amended L.1993, c. 266, § 1; L.1993, c. 267, § 1; L.1994, c. 132, § 1; L.1995, c. 694, §§ 11 to 16; L.1996, c. 16, §§ 7 to 10; L.1999, c. 457, §§ 1 to 4, eff. Jan. 5, 2000; L.2001, c. 402, §§ 1 to 3, eff. July 1, 2002; L.2004, c. 703, § 4, eff. Jan. 1, 2005.)

McKinney's Vehicle and Traffic Law § 1238, NY VEH & TRAF § 1238

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1239. Reflective material and devices for in-line skating

The commissioner is hereby directed to promulgate rules and regulations to establish standards for reflective devices and/or material to be equipped into in-line skates pursuant to section three hundred ninety-one-m of the general business law.

CREDIT(S)

(Added L.2000, c. 18, § 2.)

McKinney's Vehicle and Traffic Law § 1239, NY VEH & TRAF § 1239

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1240. Leaving the scene of an incident involving a wheeled non-motorized means of conveyance without reporting in the second degree

1. Any person age eighteen years or older operating a wheeled non-motorized means of conveyance, including, but not limited to bicycles, in-line skates, roller

skates and skate boards, who, knowing or having cause to know, that physical injury, as defined in subdivision nine of section 10.00 of the penal law, has been caused to another person, due to the operation of such non-motorized means of conveyance by such person, shall, before leaving the place where the said physical injury occurred, stop, and provide his name and residence, including street and street number, to the injured party, if practical, and also to a police officer, or in the event that no police officer is in the vicinity of the place of said injury, then such person shall report said incident as soon as physically able to the nearest police station or judicial officer.

2. Leaving the scene of an incident involving a wheeled non-motorized means of conveyance without reporting in the second degree is a violation.

CREDIT(S)

(Added L.2001, c. 468, § 1, eff. Nov. 1, 2002.)

McKinney's Vehicle and Traffic Law § 1240, NY VEH & TRAF § 1240

Current through L.2009, chapters 1 to 14 and 16 to 347.

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§ 1241. Leaving the scene of an incident involving a wheeled non-motorized means of conveyance without reporting in the first degree

1. Any person age eighteen years or older operating a wheeled non-motorized means of conveyance, including, but not limited to bicycles, in-line skates, roller skates and skate boards, who, knowing or having cause to know, that serious physical injury, as defined in subdivision ten of section 10.00 of the penal law, has been caused to another person, due to the operation of such non-motorized means of conveyance by such person, shall, before leaving the place where the said serious physical injury occurred, stop, and provide his name and residence, including street and street number, to the injured party, if practical, and also to a police officer, or in the event that no police officer is in the vicinity of the place of said injury, then such person shall report said incident as soon as physically able to the nearest police station or judicial officer.

2. Leaving the scene of an incident involving a wheeled non-motorized means of conveyance without reporting in the first degree is a class B misdemeanor.

CREDIT(S)

(Added L.2001, c. 468, § 1, eff. Nov. 1, 2002.)

McKinney's Vehicle and Traffic Law § 1241, NY VEH & TRAF § 1241

Current through L.2009, chapters 1 to 14 and 16 to 347.

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Amherst Town Code

CHAPTER 83 BUILDING CONSTRUCTION ADMINISTRATION

[HISTORY: Adopted by the Town Board of the Town of Amherst 1-20-2009 by L.L. No. 1-2009. Editor's Note: This chapter also repealed former Ch. 83, Building Construction Administration, adopted 7-5-1977 by L.L. No. 3-1977, as amended. Amendments noted where applicable.]

PART IX Sidewalks (§ 83-9-1 — § 83-9-5)

§ 83-9-5 Owner responsibility.

5-1.

Owner to maintain sidewalk; exceptions.

5-1.1.

The owner or occupant of any premises fronting or abutting on any street or highway shall repair, keep safe and maintain any sidewalk abutting the premises and keep it free and clear from snow, ice, dirt or other obstruction. All trees, shrubs, plants and other vegetation must be cut back to a height of eight feet directly above the surface of any sidewalk. Any such owner or occupant shall be liable for any injury or damage by reason of omission or failure to repair, keep safe and maintain such sidewalk or to remove snow, ice or other obstructions therefrom or negligence in performing those functions.

5-1.2.

The requirement to keep any sidewalk free and clear of snow and ice shall not be applicable to those lots where the rear lot line of a residentially zoned lot directly abuts a public sidewalk on Sheridan Drive between Fenwick Drive and Mill Street. Furthermore, this exception is applicable only to the section of the public sidewalk that abuts a rear lot line. The requirement to maintain sidewalks abutting front or side lot lines is still applicable. In addition, the requirement to keep any sidewalk free and clear of snow and ice shall not be applicable to the vacant lot located on the northeast corner of Sheridan Drive and Morgan Parkway.

5-1.3.

The requirement to keep any sidewalk free and clear of snow and ice shall not be applicable to those lots where the rear lot line of a residentially zoned lot directly

abuts a public sidewalk on Main Street between Eltham and Longleat, and to the public sidewalks abutting the side lot lines on the lots on Eltham and Longleat Parkway.

5-1.4.

The requirement to keep any sidewalk free and clear of snow and ice shall not be applicable to those lots where the rear lot line of a residentially zoned lot directly abuts a public sidewalk on Millersport Highway from house numbers 35, 41, 45, 51, 57, 63 and 69 Rosemont Drive and 254 Hartford Road. The requirement to maintain sidewalks abutting front or side lines is still applicable.

5-2.

No person shall plow, shovel, sweep or pile snow, ice or other materials in or beyond the right-of-way of any street or public highway or cause such to be done so as to interfere with the safety and convenience of public travel.

PART XIV Complaints (§ 83-14-1)

§ 83-14-1 Requirements and procedures.

1-1.

The Commissioner of Building shall review and investigate complaints which allege or assert the existence of conditions or activities that fail to comply with the Uniform Code, the Energy Code, this chapter, or any other local law, ordinance or regulation adopted for administration and enforcement of the Uniform Code or the Energy Code. The process for responding to a complaint shall include such of the following steps as the Commissioner of Building may deem to be appropriate:

A.

Performing an inspection of the conditions and/or activities alleged to be in violation, and documenting the results of such inspection;

B.

If a violation is found to exist, providing the owner of the affected property and any other person who may be responsible for the violation with notice of the violation and opportunity to abate, correct or cure the violation, or otherwise proceeding in the manner described in § 83-1-5 of this chapter;

C.

If appropriate, issuing a stop-work order;

D.

If a violation which was found to exist is abated or corrected, performing an inspection to ensure that the violation has been abated or corrected, preparing a final written report reflecting such abatement or correction, and filing such report with the complaint.

CHAPTER 95 CURB CUTS

[HISTORY: Adopted by the Town Board of the Town of Amherst 3-20-2006 by L.L. No. 3-2006. Editor's Note: This local law also repealed former Ch. 95, Curb Cuts, adopted 12-5-2005 by L.L. No. 12-2005. This chapter was adopted by said L.L. No. 3-2006 as Ch. 101 but was renumbered to fit into the organizational structure of the Code. Amendments noted where applicable.]

§ 95-4 Standards for issuance of permit.

I.

No curb may be lowered or driveway constructed which may be in any way dangerous or hazardous to pedestrians or vehicular traffic.

CHAPTER 138 NOISE

[HISTORY: Adopted by the Town Board of the Town of Amherst 11-3-2003 by L.L. No. 12-2003. Amendments noted where applicable.]

§ 138-5 Prohibited acts.

C.

The use and operation of any sound-reproduction device in a vehicle which would constitute a threat to the safety of pedestrians or vehicle operators or where conditions of overcrowding or any street repair or any other physical conditions are such that the use of a sound-reproduction device would deprive the public of the right to the safe, comfortable, convenient, and peaceful enjoyment of a public street, park or place for public purpose and would constitute a threat to the safety and welfare of the public. Said noise disturbance is deemed to be in violation of this section if it can be heard from a distance of greater than 50 feet.

D.

The use or operation of any sound-reproduction device in a vehicle which would constitute a threat to the safety of pedestrians or vehicle operators.

CHAPTER 139 NOTIFICATION OF DEFECTS

[HISTORY: Adopted by the Town Board of the Town of Amherst 11-3-1986 as L.L. No. 4-1986; Editor's Note: This local law also repealed former Ch. 139, Notification of Defects, adopted 1-16-1978 as L.L. No. 1-1978. amended in its entirety 6-5-1995

by L.L. No. 4-1995; 7-1-1996 by L.L. No. 4-1996. Subsequent amendments noted where applicable.]

§ 139-1 Limitation on liability.

No civil action shall be maintained against the Town of Amherst or the Superintendent of Highways of the town or against any improvement district in the town for damages or injuries to person or property sustained by reason of any street, highway, bridge, culvert, sidewalk or crosswalk being defective, out of repair, unsafe, dangerous or obstructed unless written notice of such defective, unsafe, dangerous or obstructed condition of such street, highway, bridge, culvert, sidewalk or crosswalk was actually given to the Town Clerk or the Superintendent of Highways and there was thereafter a failure or neglect within a reasonable time to repair or remove the defect, danger or obstruction complained of. No such action shall be maintained for damages or injuries to person or property sustained solely in consequence of the existence of snow or ice upon any street, highway, bridge, culvert, sidewalk or crosswalk unless written notice thereof, specifying the particular place, was actually given to the Town Clerk or the Superintendent of Highways and there was a failure or neglect to cause such snow or ice to be removed or to make the place otherwise reasonably safe within a reasonable time after the receipt of such notice.

CHAPTER 151 PROPERTY MAINTENANCE

[HISTORY: Adopted by the Town Board of the Town of Amherst 8-16-1976 by L.L. No. 5-1976. Amendments noted where applicable.]

ARTICLE VII General Maintenance Regulations (§ 151-47 — § 151-87)

[Added 3-20-2000 by L.L. No. 2-2000]

§ 151-60 Exterior property areas.

C.

Sidewalks and driveways. All sidewalks, walkways, stairs, driveways, parking spaces and similar areas shall be kept in a proper state of repair and maintained free from hazardous conditions. Stairs shall comply with the requirements of §§ 151-61J and 151-84I.

CHAPTER 186 VEHICLES AND TRAFFIC

[HISTORY: Adopted by the Town Board of the Town of Amherst 10-17-2005 by L.L. No. 8-2005. Editor's Note: This local law also repealed former Ch. 186, which referred to provisions concerning vehicles and traffic. Local Law No. 8-2005 stated that it would take effect 10-31-2005. Amendments noted where applicable.]

§ 186-20 Crosswalks.

No person shall operate a motor vehicle so as to fail to yield the right-of-way to pedestrians at properly marked or posted crosswalks in violation of Vehicle and Traffic Law § 1151 at the locations described in the Superintendent of Highways' Inventory of Signs kept on file in the offices of the Superintendent of Highways and the Town Clerk, as amended from time to time by resolution of the Town Board.

§ 186-24 Enforcement.

The foregoing Vehicle and Traffic Laws may be enforced by any authorized police officer, peace officer, or Town constable as defined by the laws of the State of New York. In addition, any parking enforcement officer duly appointed by the Town Board of the Town of Amherst may enforce the foregoing vehicle and traffic regulations related to parking infractions.

Williamsville Central School District Policy

5661 DISTRICT NUTRITION AND FITNESS

The Williamsville Central School District is committed to providing school environments that promote and protect student's health, well-being and ability to learn by supporting healthy eating and physical activity.

Overview

- a) The District will engage students, parents, teachers, food service professionals, and health professionals in developing, implementing, monitoring, and reviewing District-wide nutritional and fitness policies.
- b) All students in grades K-12 will have opportunities, support and encouragement to be physically active on a regular basis.

[...]

- h) Schools will provide nutrition education and physical education to foster lifelong habits of healthy eating and physical activity and will establish linkages between health education and school meal programs, and with related community services.
- i) The district will create a District Nutrition and Fitness Committee to develop, implement, monitor, review and as necessary, revise school nutrition and physical activity policies.

Nutrition and Fitness Promotion and Food Marketing

Integrating Physical Activity into the Classroom Setting:

Students need opportunities for physical activity beyond physical education class to receive the nationally recommended amount of daily physical activity (at least 60 minutes per day). Classroom health education will complement physical education by reinforcing the knowledge and skill needed to maintain a physically active lifestyle and to reduce time spent on sedentary activities.

5710 TRANSPORTATION PROGRAM

The Board of Education affirms its goal of providing a safe and economical transportation system for District students. The Board will operate a system for student transportation in accordance with the applicable laws of the State of New York, the Regulations of the Commissioner of Education, its own policies, and administrative procedures.

The District is responsible for each student from the time he/she boards the bus at the pick-up point until he/she leaves the school bus at the drop-off point.

The New York State No Fault insurance law (Regulation 68, New York Comprehensive Reparations Act), requires that if an injury is sustained by a child who is a passenger in a school bus that an insurance Claim must be filed under the parent or guardian's automobile insurance policy.

The Board will be responsible for providing transportation only between a student's legal residence and the school to which he/she has been assigned, unless otherwise authorized. The Board may make available additional transportation services as may be necessary to fulfill clearly identified needs related to the educational goals of the District.

The District will not provide transportation to non-resident students or guests. Transportation will be provided for students attending schools outside the District and for students with disabilities up to the limits established by law or Regulations of the Commissioner of Education.

Students will ride only those buses to which they have been assigned unless the Superintendent of Schools, or his/her designee, finds that circumstances exist to warrant a temporary assignment on a different bus.

Students with a temporary disability will be provided such transportation as deemed necessary upon recommendation by the Director of Pupil Personnel Services

School Bus Scheduling and Routing

The District Transportation Supervisor shall establish bus routes. Authorized bus stops shall be located at convenient intervals in places where students may embark and disembark the buses, cross highways, and await the buses in the utmost safety allowed by road conditions.

Pick-Up Points

School bus stops will be established at street corners and fire hydrants with the following exceptions:

- a) Stops may be established at more frequent intervals on major thoroughfares for children in kindergarten through grade four.
- b) Stops will not be established on private streets or roadways or within apartment, townhouse, or condominium complexes.
- c) Where fire hydrants and street corners are close to one another, a stop will be created at one or the other.
- d) Students in grades K through 4 may be expected to walk up to one-tenth of a mile to an established bus stop.
- e) Students in grades 5 through 12 may be expected to walk up to two-tenths of a mile to an established bus stop.
- f) Students may be expected to walk more than the stated one-tenth or two-tenths of a mile if they live on a non-through street which does not have bus service on it.
- g) Students living on non-through streets who live less than the specified distances and who are the only students on that street being transported on a particular bus run, will be expected to walk to the intersection with the through street.
- h) Students who live on non-through streets where there is no suitable turn around at the end of the street, and who otherwise would be eligible for transportation services, will be expected to walk to the intersection with the through street.

5730 SCHOOL BUS SAFETY PROGRAM

The safe transportation of students to and from school is of primary concern in the administration of the school bus program. All state laws and regulations pertaining to the safe use of school buses shall be observed by drivers, students and school personnel.

To assure the safety and security of students boarding or exiting school buses on school property, it shall be unlawful for a driver of a vehicle to pass a stopped school bus when the red bus signal is in operation.

The Transportation Supervisor, in cooperation with the Principals, has the responsibility of developing and publishing safety rules to be followed by drivers and passengers, including rules of student conduct. In order to ensure maximum safety to those riding school buses, it is necessary that students and drivers

cooperate in this effort. There is no substitute for training to develop safe habits in pedestrian and vehicular traffic.

Some students are eligible for District transportation. While the law requires the District to furnish transportation for such students, it does not relieve parent(s) or guardian(s) of the responsibility for supervision until such time as the child boards the bus in the morning and after the child leaves the bus at the end of the school day. Only after a child boards the bus does he/she become the responsibility of the District. Such responsibility shall end when the child is delivered to the regular bus stop at the close of the school day.

Since the school bus may be regarded as an extension of the classroom, children are required to conduct themselves on the bus in a manner consistent with established standards for classroom behavior. Excessive noise, pushing, shoving and fighting will not be tolerated. It is important that those waiting for buses conduct themselves properly in respect to the rights and property of others.

All buses and other vehicles owned and operated by the District and all buses and other vehicles owned by vendors/contract bus companies with whom the District contracts will have frequent safety inspections, and will be serviced regularly. The Transportation Supervisor will maintain a comprehensive record of all maintenance performed on each vehicle.

Every bus driver is required to report promptly any school bus accident involving death, injury, or property damage. All accidents, regardless of damage involved, must be reported at once to the Transportation Supervisor.

8210 SAFETY CONDITIONS AND PROGRAMS

The practice of safety will be considered an integral part of the instructional program through fire prevention, emergency procedures and drills, driver education, and traffic and pedestrian safety.

Each Principal will be responsible for the supervision of a safety program for his/her school.

The safety program may include, but not limited to, in-service training, fire prevention, accident recordkeeping, driver and vehicle safety programs, emergency procedures and drills, and traffic safety programs relevant to students, employees and the community.

It shall be the duty of the Board of Education to provide inspections and supervision of the health and safety aspects of the school facilities.

8211 PREVENTION INSTRUCTION

Instruction on Prevention of Child Abduction

All students in grades K through 8 in District schools shall receive instruction designed to prevent the abduction of children. Such instruction shall be provided by or under the direct supervision of regular classroom teachers and the Board of Education shall provide appropriate training and curriculum materials for the regular classroom teachers who provide such instruction. However, at the Board's discretion, such instruction may be provided by any other public or private agency.

The Commissioner of Education will provide technical assistance to assist in the development of curricula for such courses of study which must be age appropriate and developed according to the needs and abilities of students at successive grade levels in order to provide awareness skills, information, self-confidence, and support to aid in the prevention of child abduction.

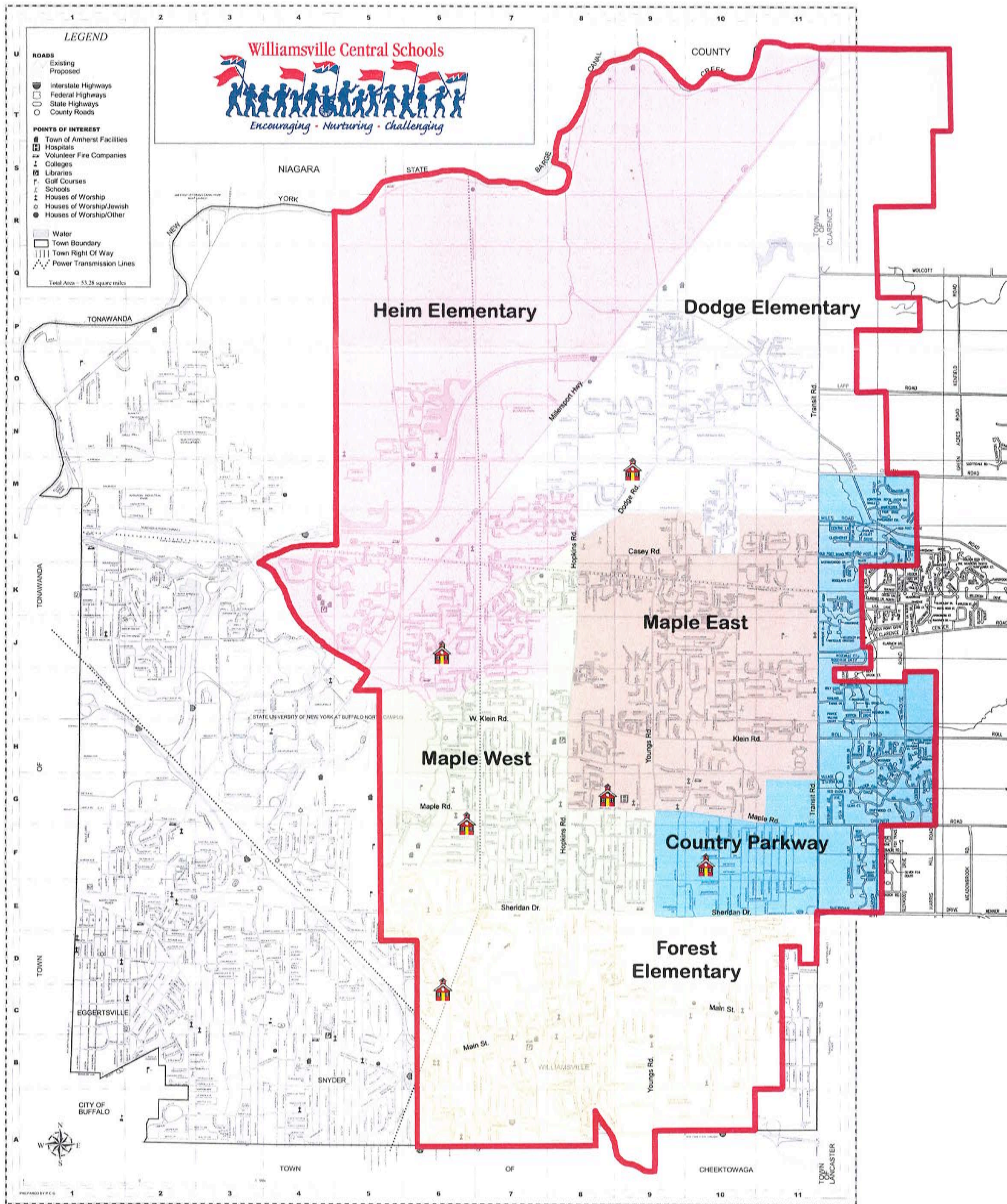
For purposes of developing such courses of study, the Board of Education may establish local advisory councils or utilize the school-based shared decision making and planning committee established pursuant to the Regulations of the Commissioner to make recommendations concerning the content and implementation of such courses. Alternatively, the District may utilize courses of instruction developed by consortia of school districts, boards of cooperative educational services, other school districts, or any other public or private agency. Such advisory council shall consist of, but not be limited to, parents, school trustees and Board members, appropriate school personnel, business and community representatives, and law enforcement personnel having experience in the prevention of child abduction.

Williamsville Central School District Policy Manual Third Draft, Updated 3-30-2009.



Williamsville Central Schools Elementary School Attendance Areas

Printed January 2003



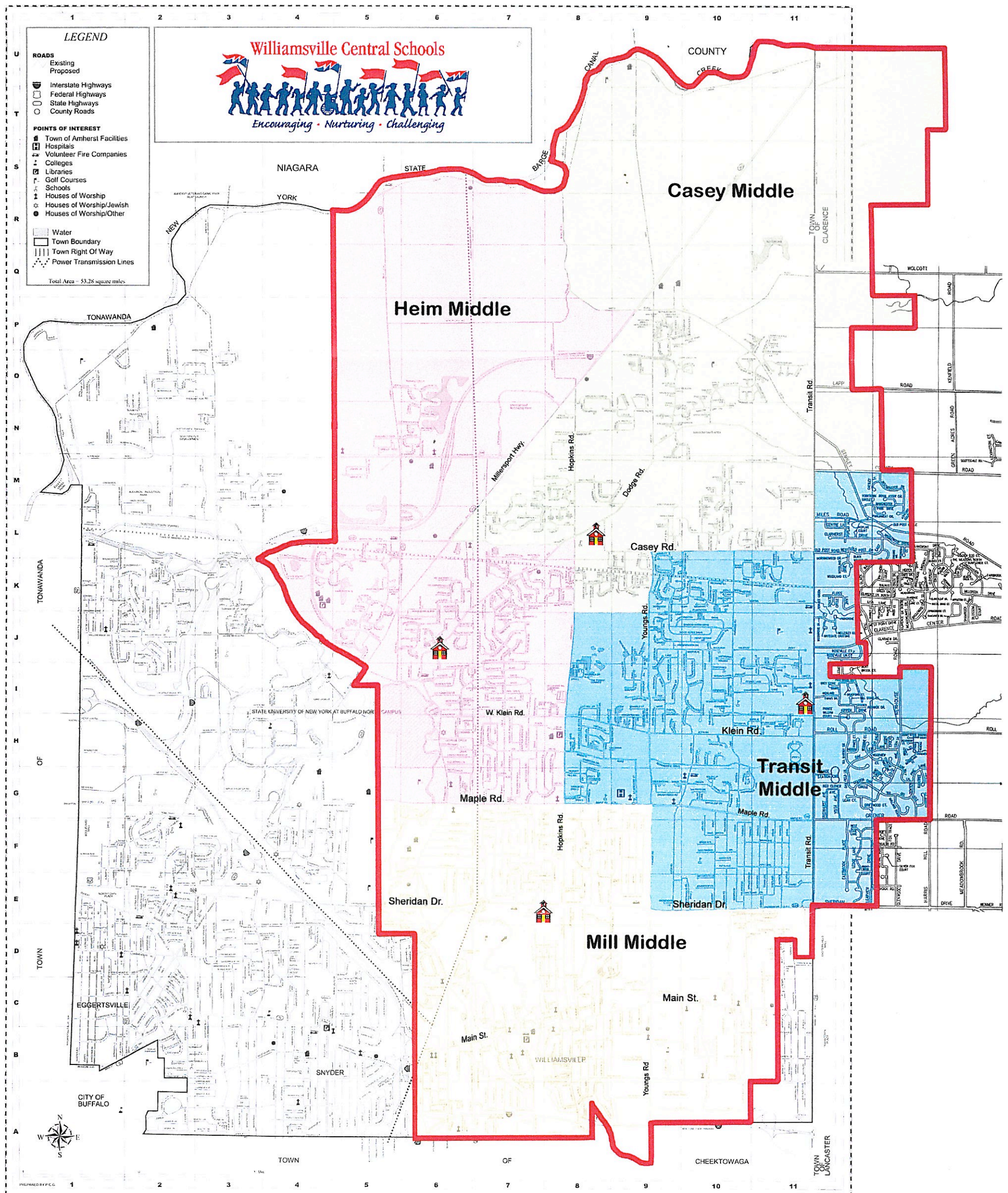
Important: The shaded School Attendance Areas on this map include only the existing housing and streets located within a given area.

In accordance with school board policy, **the school assignment will remain undetermined for all undeveloped property within the Williamsville Central School District until such time a new housing subdivision is approved by the municipality in which it is located.** At that time, the Williamsville Board of Education will assign a school attendance pattern to the new street(s)/address. Therefore, a new housing development may or may not be assigned to the shaded School Attendance Area as depicted on this map.

Homebuyers who are purchasing a home in a **new development** should contact the school district at **626-8027** to find out what schools their children will be attending.

Williamsville Central Schools Middle School Attendance Areas

Printed January 2003



Important: The shaded School Attendance Areas on this map include only the existing housing and streets located within a given area.

In accordance with school board policy, **the school assignment will remain undetermined for all undeveloped property within the Williamsville Central School District until such time a new housing subdivision is approved by the municipality in which it is located.** At that time, the Williamsville Board of Education will assign a school attendance pattern to the new street(s)/address. Therefore, a new housing development may or may not be assigned to the shaded School Attendance Area as depicted on this map.

Homebuyers who are purchasing a home in a **new development** should contact the school district at **626-8027** to find out what schools their children will be attending.

Appendix H

Kid Corridors Route Maps



Dear Parents/Guardians:

The attached Kid Corridors Map is designed to help educate your child about the best walking and bicycling routes to school. It shows the shortest routes to schools, locations of sidewalks, and locations of crossing guards. Please discuss the map with your child(ren) and select an appropriate walking route for your child(ren).

Please follow the steps listed below to help ensure the safety of all students of the Williamsville Central School District:

1. **Take the time to determine and fully discuss the safest route to and from school with your child(ren). Point out available pedestrian/bicycling safety features such as sidewalks, traffic signals, and crossing guards. Discuss and agree upon a route that takes advantage of these features.**
2. **Review common traffic concerns and rules such as awareness of vehicles turning at intersections, the importance and proper use of crosswalks, and the need to respect and follow the direction of police, crossing guards, and school staff. Students should practice safe walking behaviors at all times.**

Please help protect all children in the Williamsville Central School District by assisting not only your own children but also those of other parents. **When driving near school locations during student arrival and/or dismissal times please keep in mind that children may be walking or biking in the vicinity. Obey all traffic laws including pedestrian's right of way in crosswalks.** Respect all enforcement personnel and school staff and obey **REDUCED SPEED LIMIT SIGNS AND ALL PARKING RESTRICTIONS POSTED AT SCHOOLS.**

If you drive your child(ren) to school please be aware of other children walking and biking in the vicinity. Do not drop off or pick up your child(ren) across the street from school as this practice frequently results in students darting across traffic. If you *must* park across the street from the school please accompany your child(ren) across the street.

Thank you for your cooperation in protecting all children of Williamsville Central School District.






Note to Parents:

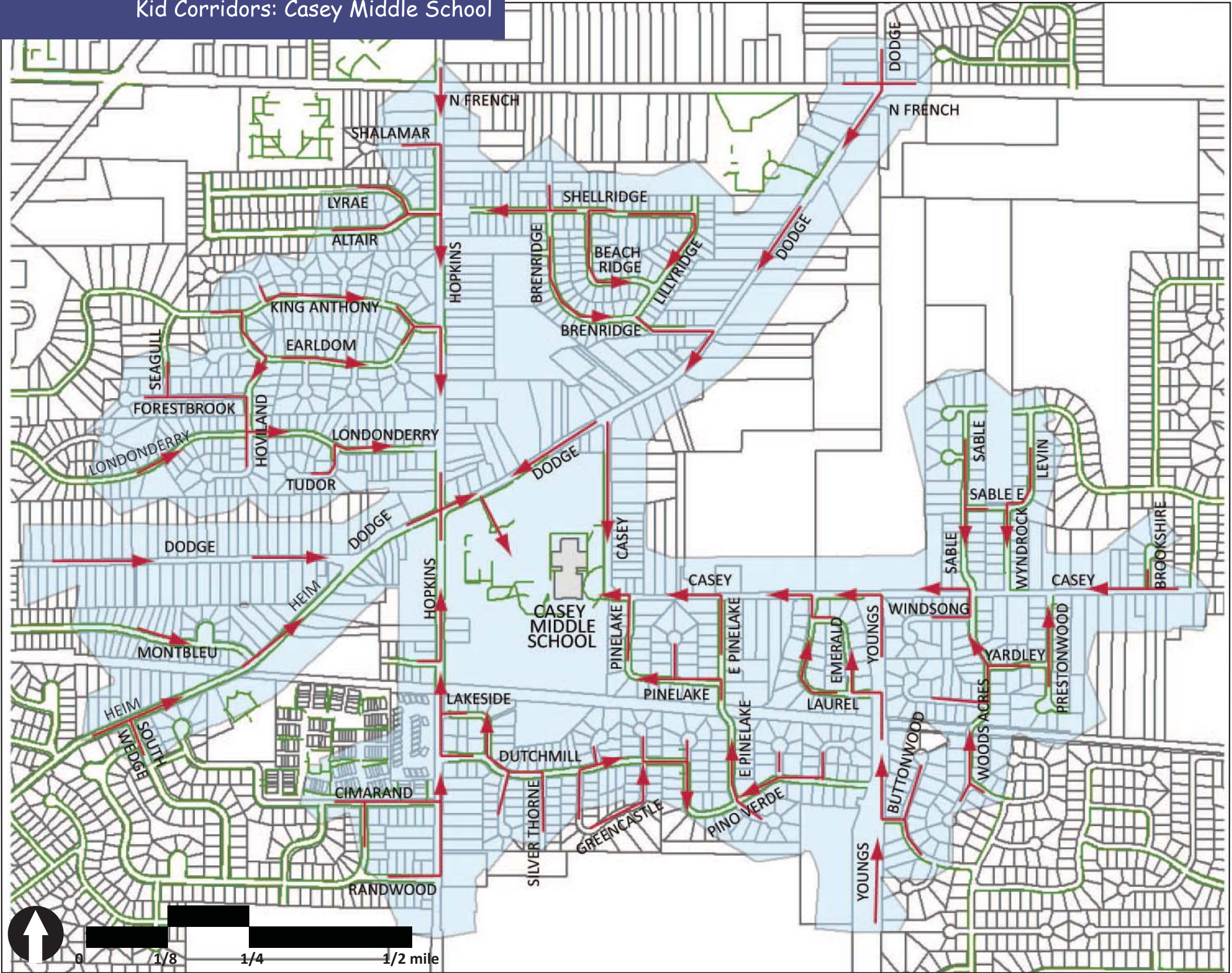
Please help your child mark his or her home and the route they should take to their school. To do this, find the nearest red arrow to your home and follow along consecutive arrows until you get to your child's school.

Walk/Bicycle along the selected route with your child and point out such traffic control features shown on the map as crossing guards (the yellow stars), and sidewalks (in green), etc. on their route to school.

Please keep in mind this map does not include any informal paths such as those cutting across school athletic fields. You should consider the possible benefits and detriments of using such informal paths before instructing your child whether or not to use them.

Please occasionally review the map with your child as a reminder of their proper route to school.

-  Shortest path to school
-  Location of sidewalks
-  Homes within a 1-mile walking distance from school





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- ➡ Shortest path to school
- Location of sidewalks
- Homes within a 1-mile walking distance from school
- ★ Location of crossing guards





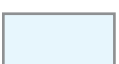
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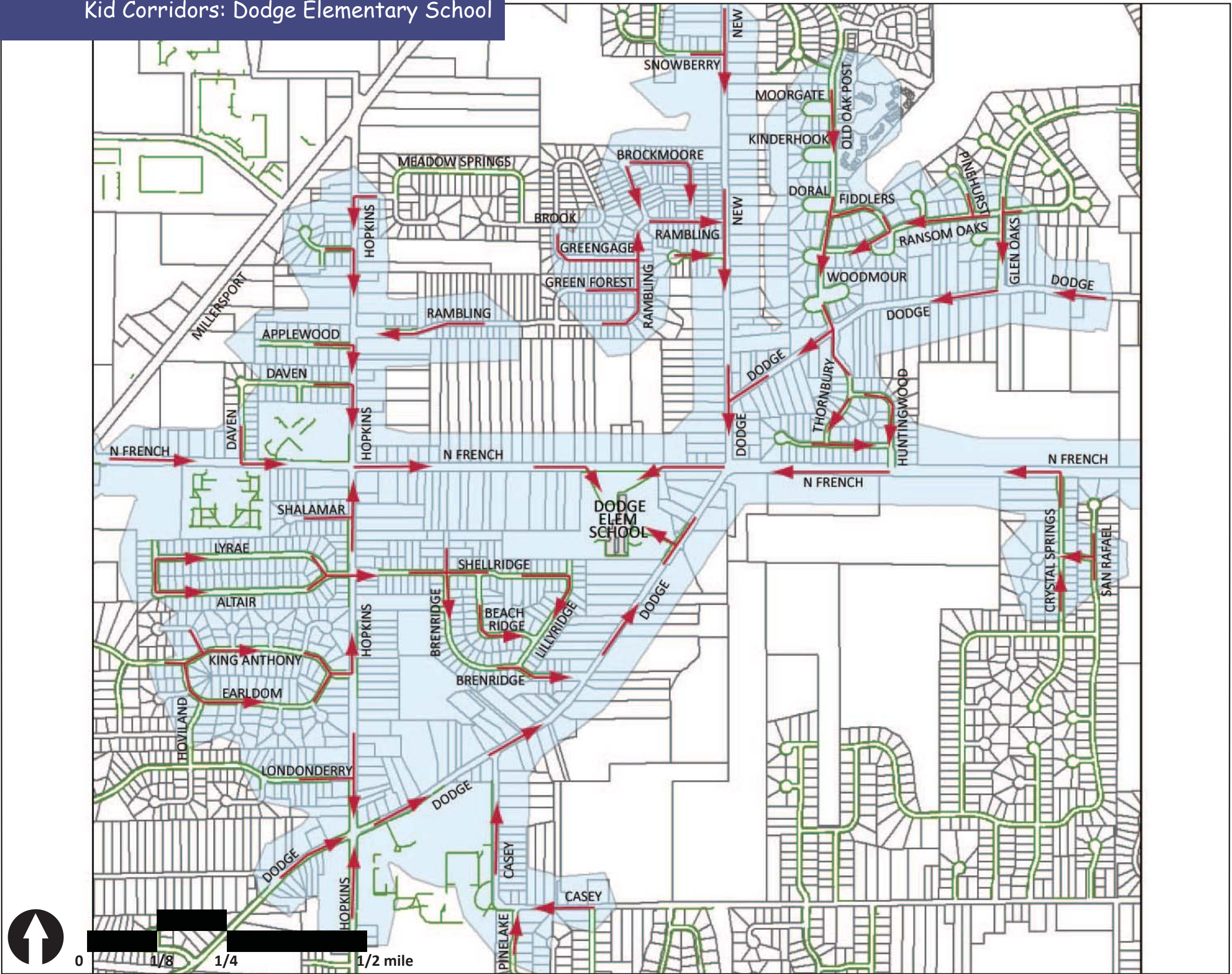
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Kid Corridors: Forest Elementary School

FOREST ELEM.





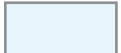

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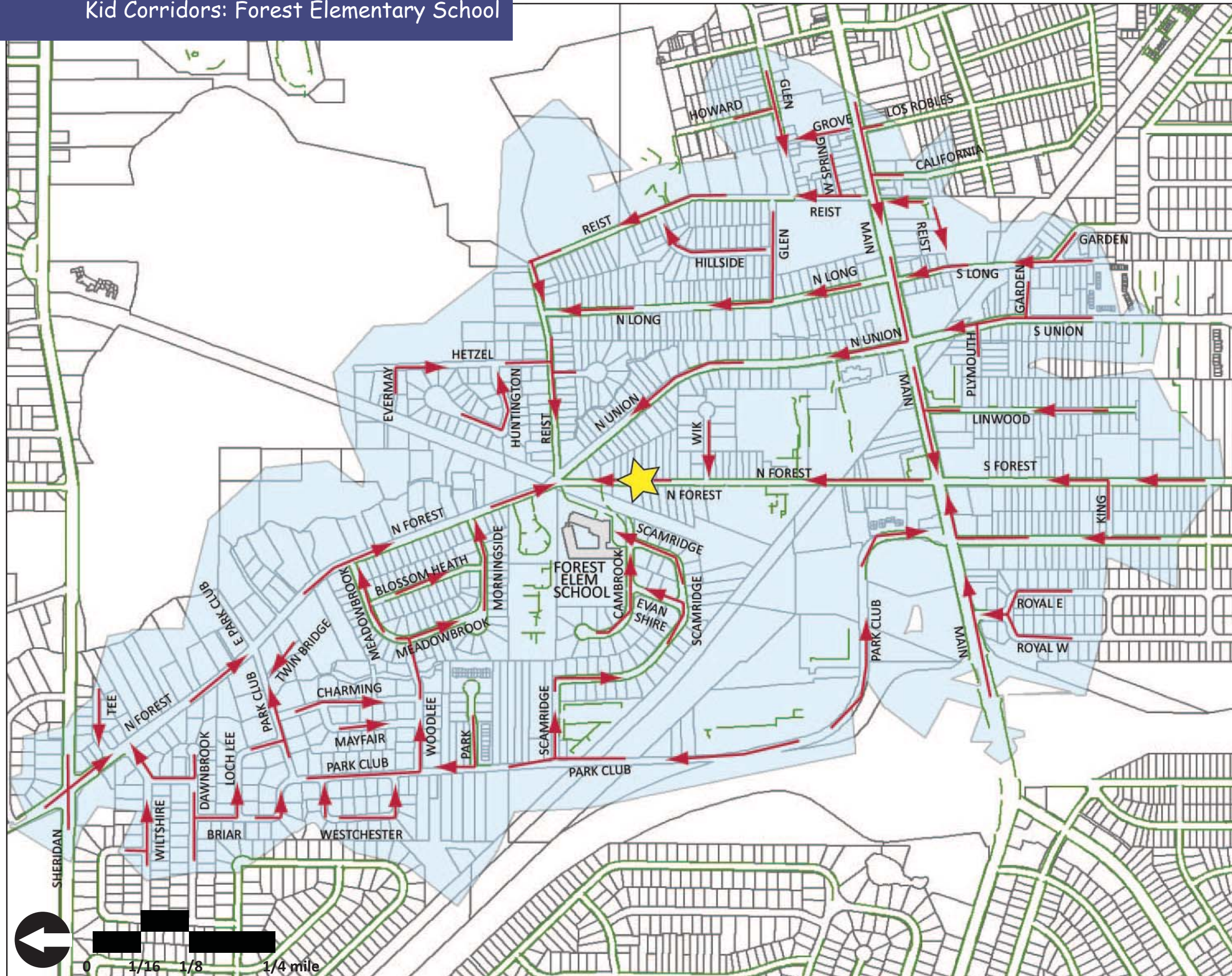
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-  Location of sidewalks
-  Homes within a 1-mile walking distance from school
-  Location of crossing guards





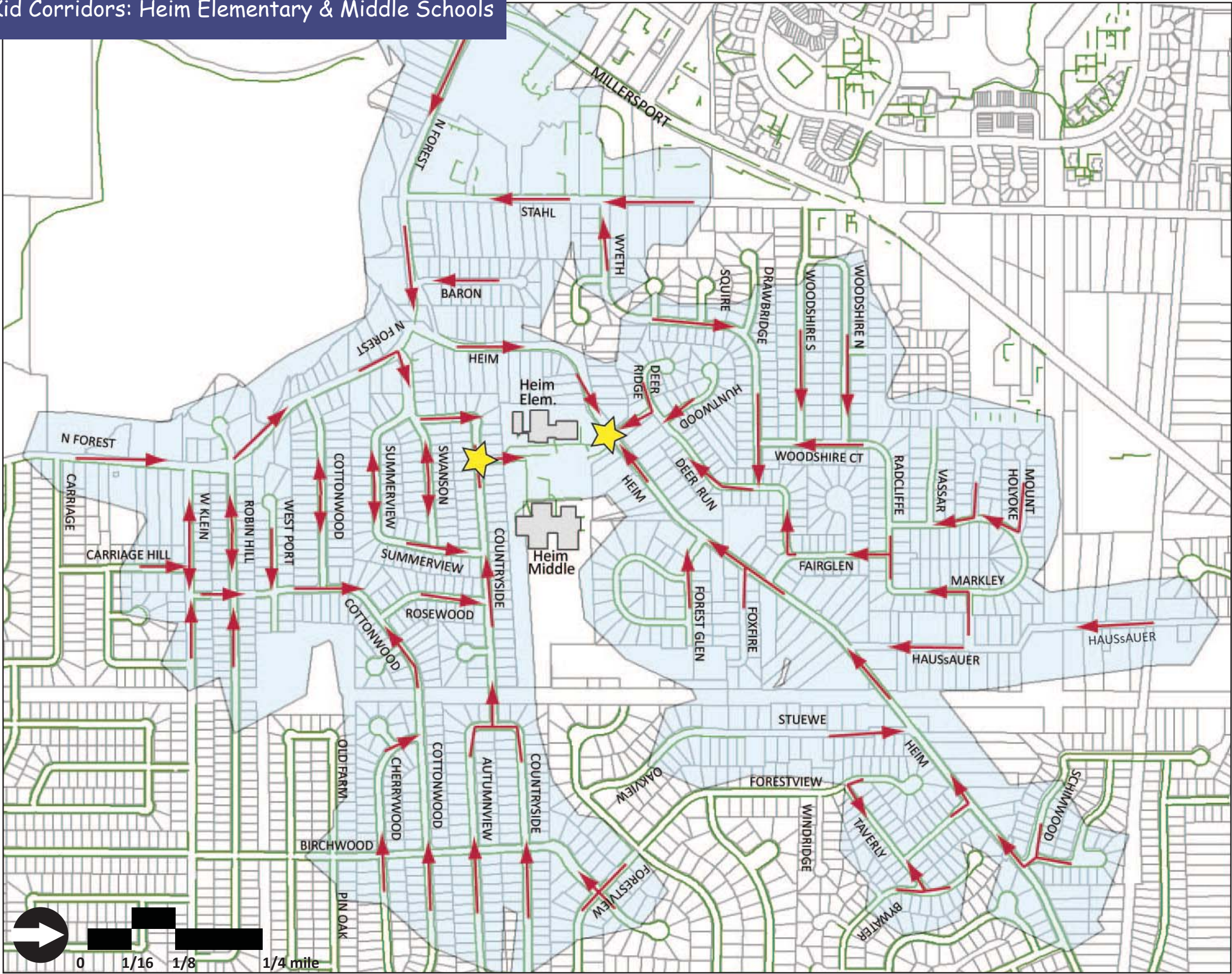
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- Location of sidewalks
- Homes within a 1-mile walking distance from school
- ★ Location of crossing guards





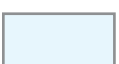
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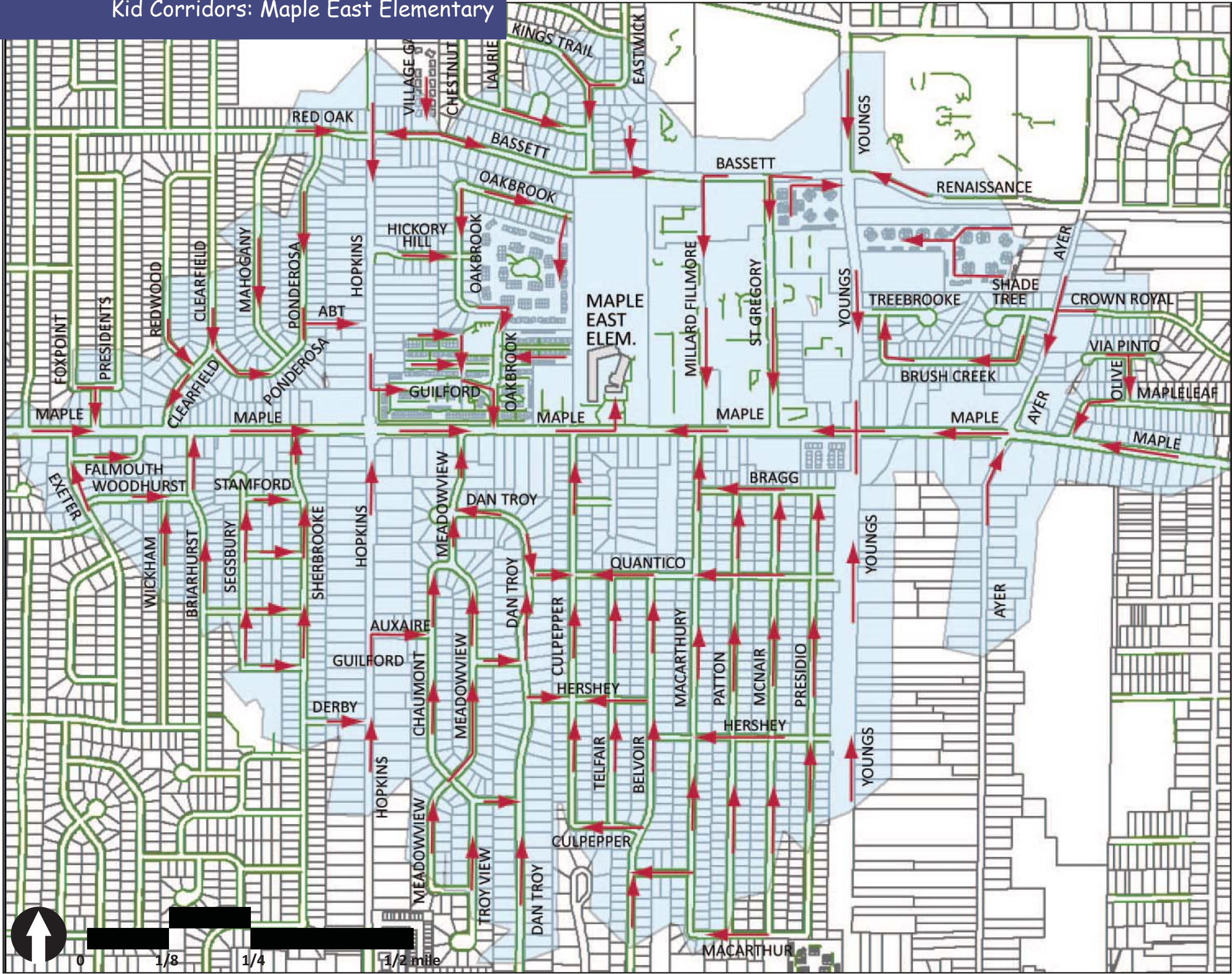
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-  Homes within a 1-mile walking distance from school





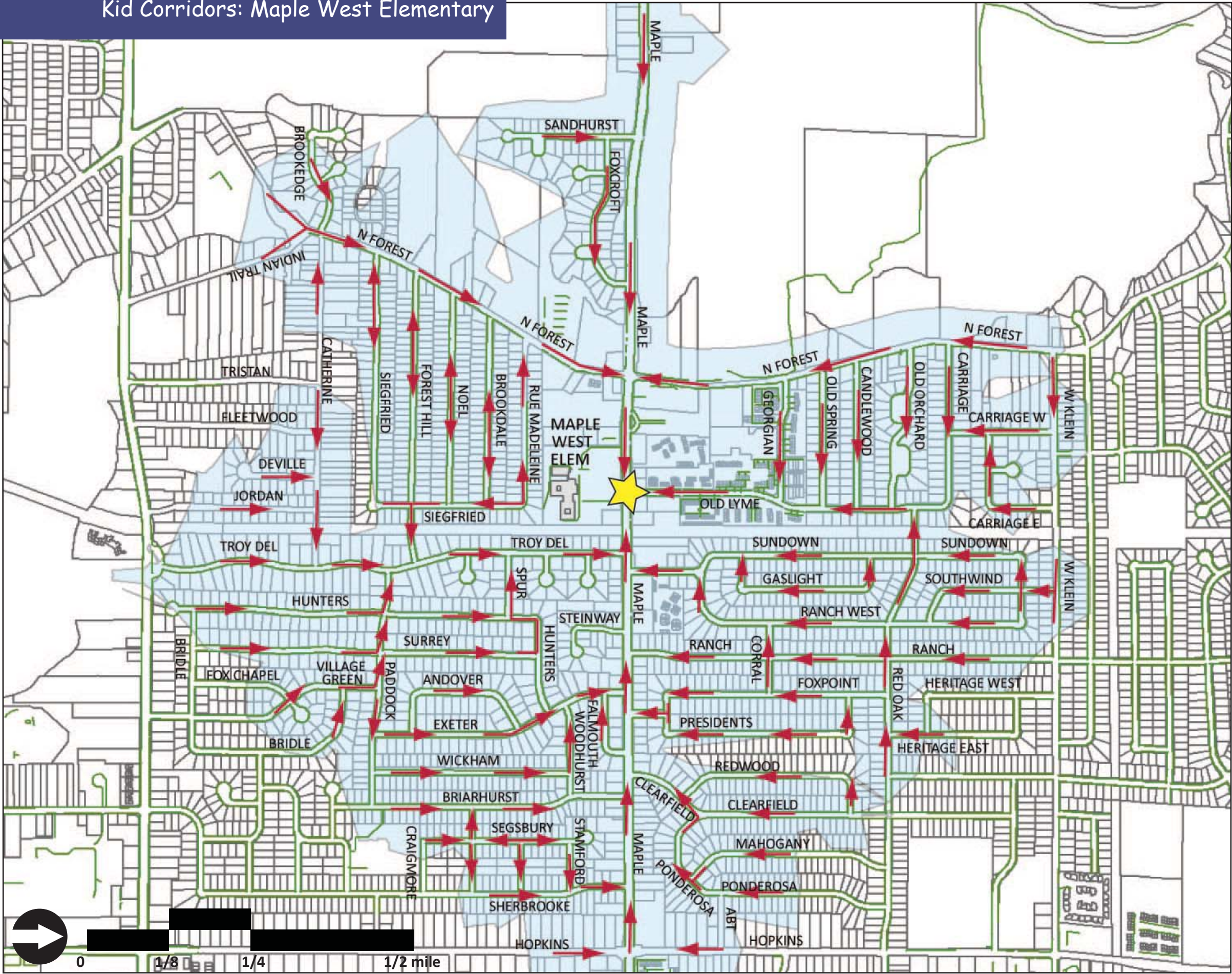
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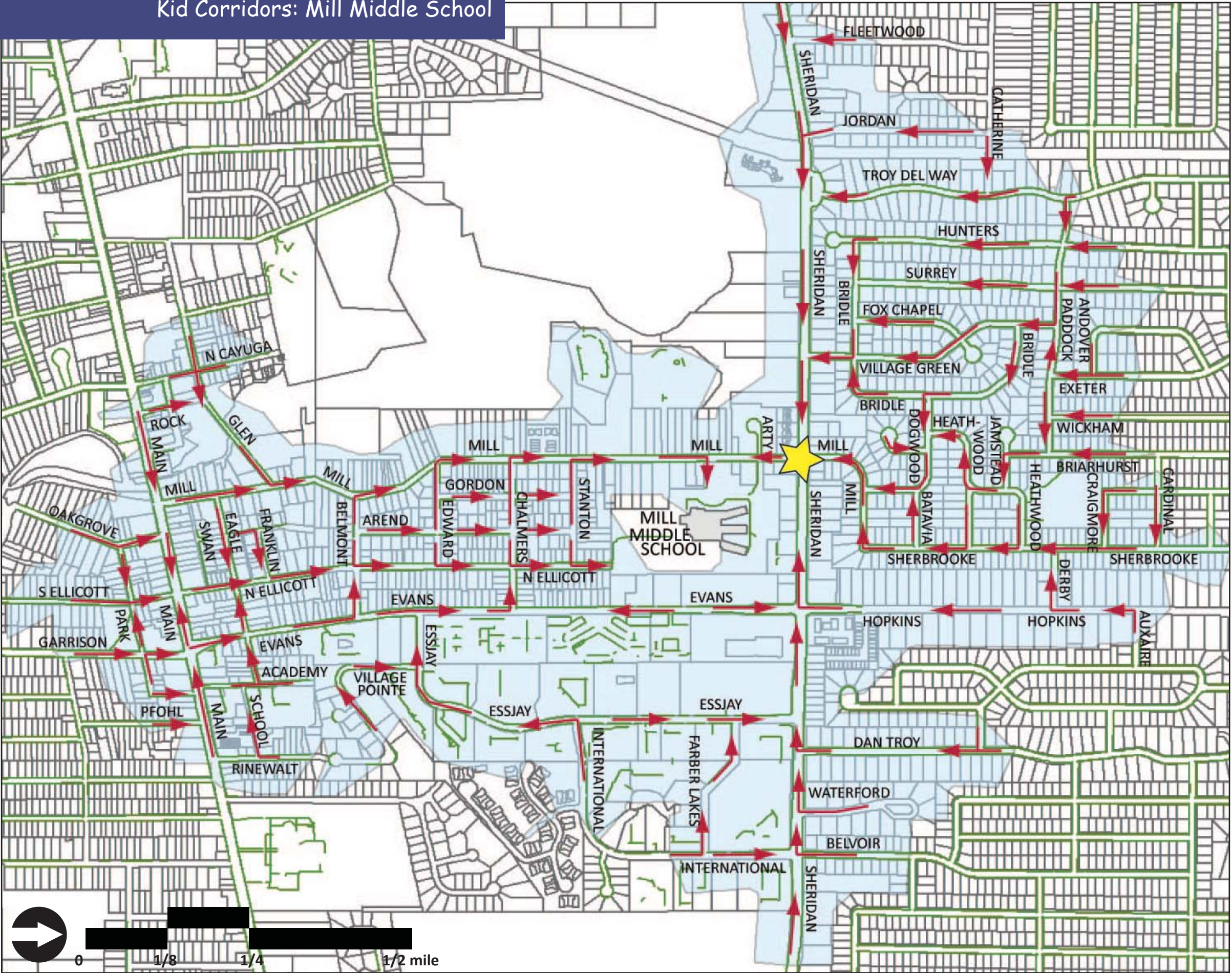
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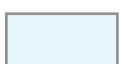
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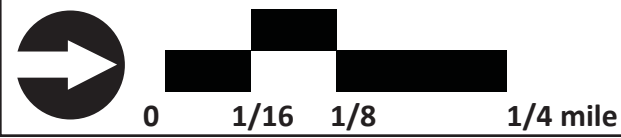
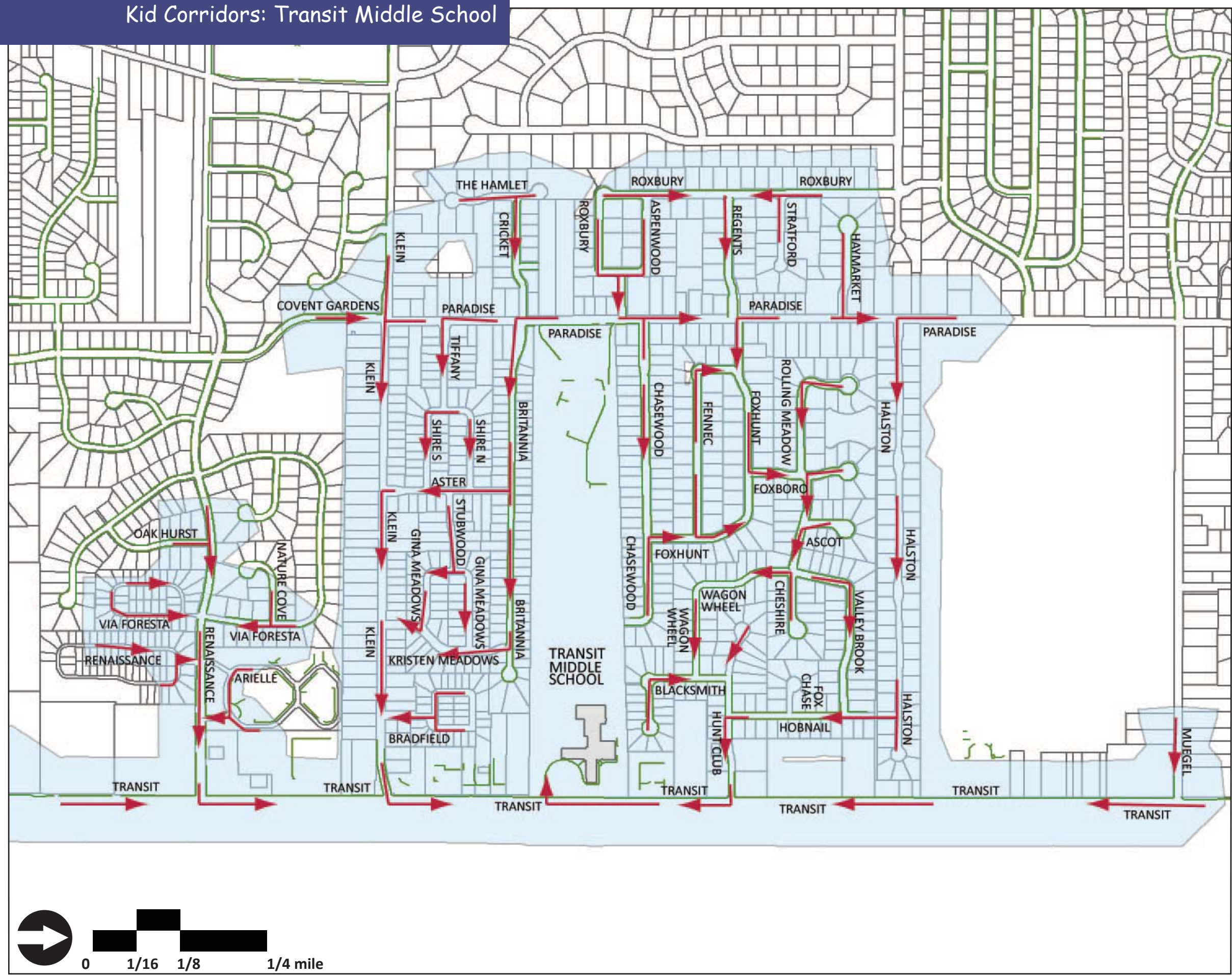
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Curriculum materials can be found in a separate document entitled *Safe to School Amherst!*

