

Walkabout Summary Report

Introduction

On October 16, 2014, stakeholders at Walker Upper Elementary School in Charlottesville, Virginia met to examine the walking and bicycling network around the school and identify potential improvements to be included in a Transportation Alternatives Program grant application. Participation in a VDOT Safe Routes to School (SRTS) Walkabout shows their support for improving the walking and biking environment and increasing the number of students safely walking and bicycling to school. The stakeholders participating in the Walkabout included members of Walker Upper Elementary School, the City of Charlottesville Neighborhood Development Services, and the City of Charlottesville Police Department.



Walkabout Team

Name	Organization			
Vernon Bock	Walker Upper Elementary School, Principal			
Chris Wiles	Walker Upper Elementary School, Parent			
David Wiles	Walker Upper Elementary School, Student representative			
Brian Haluska	City of Charlottesville – Neighborhood Development Services, Neighborhood Planner			
Amanda Poncy	City of Charlottesville – Neighborhood Development Services, Bicycle and Pedestrian Coordinator			
Marty Silman, PE	City of Charlottesville – Neighborhood Development Services, Civil Engineer			
Tammy Shiflett	City of Charlottesville – Police Department, School Resource Office			
Bryan Barnett-Woods	Virginia Safe Routes to School			
Emily Leckvarcik	Toole Design Group			

The three-hour meeting included a discussion of potential barriers to walking and bicycling, an observation of school dismissal, and a walking tour of the nearby neighborhood. The table below summarizes existing conditions along key streets in the area. See the SRTS Walkabout Walk Route map on page 16.



Walking Routes

Street	Speed limit	No. lanes each direction	Road Width ¹	No. sidewalks	Sidewalk width, if present ¹
Dairy Road	25 mph	1	22 ft	1	5-6 ft
Del Mar Drive	mph	1	32 ft	0	N/A
Gentry Lane	15 – 25 mph	1	22-35 ft	1	5-6 ft
Oakleaf lane	mph	1	38 ft	0	N/A
Rose Hill Drive	mph	1	30-35 ft	1	4-5 ft

Existing conditions

Students' proximity and school location

Walker Upper Elementary School is located on Gentry Lane, though its official address is 1564 Dairy Rd, Charlottesville, Virginia. The school is in the Barracks-Rugby neighborhood, a primarily residential neighborhood in north-central Charlottesville. However, unlike traditional elementary schools, Walker Upper Elementary School does not serve a specific neighborhood in Charlottesville; all public school students grades 5 & 6 in the city attend Walker Upper Elementary School. The school's walk-zone is approximately one-half of a mile from the school and since the attendance boundary is the city boundary, the majority of Walker Upper Elementary School students will travel more than two miles to reach the school:

0.7% (4 students) travel less than 1/3 miles to the school
1.7% (9 students) travel less than 1/2 miles to the school
10.1 % (57 students) travel less than 1 mile to the school
31.5 % (164 students) travel less than 2 miles to the school
3.4% (18 students) live within the school's walk-zone

The Route 250 Bypass is immediately northeast of the school. Although there is a bridge crossing the bypass, convenient pedestrian access to the school is limited by the bypass and the traffic entering the bypass, at



Walker Upper Elementary School is located adjacent the Route 250 Bypass and can be accessed by Gentry lane and Rose Hill Drive.

¹ Street and sidewalk widths are approximate



the intersection closest the school.

The school is accessible by two roads. The first is Gentry Lane, which passes by the front of the school. In addition to accessing the school, this road can be used to access the City of Charlottesville Public Schools administration building, located directly north of the school, and an onramp for the Route 250 Bypass. There is a sidewalk along the length of the road on the side of the school, and there are two flashing beacons on Gentry Lane to remind drivers that the speed limit is 15 MPH during school dismissal and arrival. One of the beacons is south of the school east of Greenleaf Lane, and the second is at the intersection north of the school. The width of Gentry Lane varies between 24 and 34 feet. The widest portion is in front of the school entrance, where vehicles can parallel park on the west side of the street and buses park on the east side of the street to load and unload students.

Rose Hill Drive also provides direct access to the school from the south, providing a route to school for the residential neighborhood to the south. Rose Hill Drive also provides a connection to the community recreation center just south of the school. While Rose Hill Drive has only two travel lanes, it is wide enough to provide space for motor vehicle parking on both sides. A sidewalk on the east side of the road continues the length of the road to the side entrance of the school. There are a few hills on Rose Hill Drive which decrease the sight distances for people traveling along the road.

Several streets serve as neighborhood connectors linking Rose Hill Drive to Gentry Road. These residential streets intersect with Rose Hill Drive at different points south of the school, but intersect with each other at the same location at Gentry Lane. Walkabout participants noted that motorists often choose to drive on Rose Hill Drive and one of these connector streets as a way to cut-through the neighborhood to reach Gentry Lane and then the Route 250 Bypass entrance.

- Oakleaf Lane is the first east-west street south of the school; it ends at Rose Hill Drive on the east, and intersects with Greenleaf Lane one block west. At the intersection with Rose Hill Drive, Oakleaf Lane is nearly 70 feet across, which can allow vehicles to turn at speeds perceived higher than the speed limit. Walkabout participants observed that the property owner at the corner of Rose Hill Drive and Oakleaf Lane had put neon-yellow "children at play" signs to influence motor vehicle speeds at the intersection. Oakleaf Lane is about the same width as Rose Hill Drive, with two travel lanes and parking on both sides, and no sidewalks.
- Del Mar Drive is a northwest-southeast street that is one block south of Oakleaf Lane, and two blocks south of the
 side entrance to Walker Upper Elementary School. Similar to Oakleaf Lane and Rose Hill Drive, Del Mar is wide
 enough for motor vehicle parking on both sides in addition to two travel lanes. There are no sidewalks along either
 side of the roadway. Del Mar also curves north as it goes uphill, so sightlines are limited for those traveling along the
 road.
- Dairy Road runs parallel to Gentry Lane until the two roads intersect one block northwest of the school. Dairy Road is also one of the few roads that cross over the Route 250 Bypass. The Dairy Road bridge is a short distance from the school and not only provides access to the neighborhood on the opposite side of the Route 250 Bypass, but also a shared use path that runs northwest-southeast along the Route 250 Bypass and provides non-motorized access to the school from neighborhoods northeast of the school. Walkabout participants noted that this bridge will be redesigned in the coming years.



Walkabout Summary

Prior to observing student dismissal, the Walkabout Team met at Walker Upper Elementary School to discuss possible walking and bicycling infrastructure improvements for the area. The Walkabout team noted the intersection of Gentry Lane and the Route 250 Bypass entrance is a barrier for walking and bicycling, because motorists travel at speeds perceived faster than the posted limit as they enter the bypass. Walkabout participants also noted sections of Rose Hill Drive as a barrier to walking and bicycling because the topography can restrict the visibility of those traveling along the road.

The Walkabout team observed student dismissal from two locations. The first location was at the front entrance of the school, along Gentry Lane and the second location was at the side entrance of the school at the end of Rose Hill Dr. Half of the school buses pick up students at the front entrance and the other half pick up students at the side entrance. Walkabout participants noted that even though school buses pick up students from different locations in the afternoon, all of the buses drop students off at the front entrance on Gentry Lane in the morning.

Walkers, car riders, and a portion of bus riders use the front entrance. No students were observed bicycling. The school's resource officer acted as a crossing guard during dismissal and directed traffic. A few students walk along Gentry Lane, traveling in both directions. The students that walked north on Gentry Lane did not stay on the sidewalk when crossing the entrance to the school division administration building. Instead, the students walked in the roadway, behind a row of parked cars, which is the most direct route north of the school. Students walking south on Gentry Lane crossed the parking lot using the crosswalk and then along the sidewalk. Walkabout participants observed parents or guardians parking on Gentry Lane across from the school entrance and south of the parking lot entrance to pick up students. These students would use the crosswalk along the parking lot to meet their parents or guardians. Bus riders exiting the school's front entrance board buses lined up along Gentry Lane on the school side of the road. The buses head north, once all the children have boarded. Walkabout participants observed motor vehicles passing school buses in both directions, even though the school bus stop sign was activated, signaling the need to stop per state law.²
Furthermore, the Walkabout participants observed vehicles turning right onto Gentry Lane, from the Route 250 Bypass entrance, at speeds perceived higher than the posted limit. Driver behavior adversely affects the safety of all pedestrians using Gentry Road, especially during arrival and dismissal when there are many students using the front entrance of the school.

At the side entrance, school buses made a circle at the end of Rosehill Drive and students boarded the appropriate bus. Several parents or guardians were observed parking along Rose Hill Drive and waiting for their child by their car, or just south of where the buses were. Walkabout participants only observed a few students walking along Rose Hill Drive and observed no students bicycling.

² Virginia Code § 46.2-859



Key Barriers and Issues

The low proportion of students and families walking or bicycling to school is in part due to the school's city-wide attendance boundary and the distance that many students live from the school. In fact, only 10.1% of students live within a mile of the school, as shown on the student locator map on page 17. Moreover, the school's walk-zone is approximately one-half of a mile from the school and students beyond that distance are offered bus service, further reducing the number of potential student walkers. Additionally, an inconsistent quality of walking and bicycling facilities near the school may further limit the number of students walking and bicycling. For example, roadway facilities on Gentry Lane at the school's front entrance and along Rose Hill Drive do not actively calm traffic or create comfortable walking and bicycling conditions, which in turn can affect a parent's perception of safe walking and bicycling and the decision to allow a child to walk or bike to school. The following issues that likely contribute to the overall walking and bicycling environment may discourage students and their families from walking or bicycling to school.

Gentry Lane

- Road width. The width of Gentry lane in front of the school allows motor vehicles to travel at speeds higher than the posted limit and pass buses during arrival and dismissal. The wide turning radii at the intersection of Gentry Lane and the Route 250 Bypass entrance also allows vehicles to turn onto Gentry Lane at speeds perceived to be higher than the speed limit.
- Parking in front of School Division Administration Building. The eleven parking spaces in front of the school administration building are perpendicular to Gentry Lane, and the existing sidewalk is diverted around the parking spaces. This creates a situation where pedestrians choose to take a direct path of travel, walking between the parking spaces and the roadway (actually in the roadway) instead of along the sidewalk.
- Crossings. The only existing crosswalk crossing Gentry Lane is to the south of the school at Greenleaf Lane. Students and parents walking or bicycling to Walker Upper Elementary would have to cross the street without the benefit of a crosswalk. Additionally, the crossing at the school's parking lot entrance is wider than a typical roadway crossing in the area, without the benefit of a pedestrian refuge island to reduce the crossing distance.
- Traffic Volume and speeds. Although Gentry Lane has perceived low traffic volumes throughout most of the day,
 during arrival and dismissal the perceived volume is significantly higher. Since it is during these times that students
 could walk or bike to school, it is perceived that walking and bicycling is less safe than traveling by motor vehicle.

Dairy Road

- Stop controlled motor vehicle traffic. The intersection of Diary Road and the Route 250 Bypass only has stop control for vehicles heading east and west. Pedestrians walking north and south need wait for a gap in traffic and cross at their own risk.
- *Crossings.* An access point to a shared use path that travels along the Route 250 Bypass is immediately east of the Dairy Road bridge, however there is no direct crossing to get from this access point to the sidewalk across the street.

Rose Hill Drive

• Road width. The width of Rose Hill Drive allows motor vehicles to travel at speeds perceived higher than the posted limit. Additionally, the wide turning radius at the intersection of Rose Hill Drive and Oakleaf Lane does not



encourage motorists to slow down for the turn. As a consequence, motorists tend to make the turn at speeds perceived to be higher than the speed limit.

- Crossings and sidewalks. The only sidewalk along Rose Hill Drive is on the east side of the street, and the only marked crosswalk is at Greenleaf Lane, south of Del Mar Drive, which is outside the school's 1/3 mile walk zone. As a result, pedestrians and bicyclists within the walk zone and living on the west side of the road must cross Rose Hill Drive at an unmarked crossing to use the sidewalk.
- *Topography*. The hilly nature of portions of Rose Hill Drive can limit the sight distance of motorists and pedestrians, which can adversely affect where a pedestrian choose to cross Rose Hill Drive.

Oakleaf Lane and Del Mar Drive

- Road Width. The width of both Oakleaf Lane and Del Mar Drive encourage motorists to travel at speeds perceived
 faster than the posted limit. Additionally, their intersections with Rose Hill Drive also have relatively wide turning
 radii, which also allow vehicles to turn at perceived speeds higher than posted limits.
- Sidewalks. Neither Oakleaf Lane nor Del Mar Drive have sidewalks for pedestrians or young bicyclists.

Intersection of Gentry Lane, Oakleaf Lane, Del Mar Drive, and Greenleaf Lane

- Intersection geometry. This intersection is composed of two smaller intersections the intersection of Greenleaf Lane and Gentry Lane, and the intersection of Greenleaf Lane, Oakleaf Lane, and Del Mar Drive. Sight distances are limited and can restrict visibility for motorists, pedestrians, and bicyclists.
- Road width. The widths of these intersections encourage motorists to turn at speeds perceived to be faster than the posted speed limit.

Assessment of barriers and issues and opportunities

Although there are sidewalks in the area, the pedestrian and bicycle network is not complete and the existing infrastructure is not designed to support safe and convenient walking and bicycling. Wide roads, missing sidewalk segments, and sporadic crosswalks can deter students and families from walking or bicycling to school.

The best practices approach to increasing the number of students safely walking and bicycling to school is to improve and expand upon the existing walking and bicycling facilities. The infrastructure improvements recommended in this report and shown on the recommendations map (page 18) are designed to help calm motor vehicle traffic at locations where students could be walking and biking, increase motorist awareness of pedestrians and bicyclists, and develop a more complete walking and bicycling network.



Infrastructure (Engineering) Recommendations

GLOSSARY OF RECOMMENDATIONS

The recommendations use a variety of infrastructure treatments that increase the amount space dedicated to active transportation and improve existing facilities for walking and bicycling. Additionally, these recommendations aim to lower the perceived motor vehicles speeds. The Walkabout recommendations include the follow treatments:

Sidewalks

Sidewalks provide a paved space separate from the roadway for pedestrians and young bicyclists to travel. Sidewalks that meet ADA guidelines include a minimum width of five feet, have curbs to separate the sidewalk from the roadway, and curb ramps to connect to crosswalks.

Sidewalk and curb extensions

Sidewalk and curb extensions capture a small area of the roadway for pedestrian use. This treatment is used for several purposes: to create wider sidewalks, to buffer pedestrians from motor vehicle traffic in the roadway, to shorten pedestrian crossing distances, and to slow traffic speeds.

High visibility crosswalks

High visibility crosswalks use a "zebra" or "ladder" pattern for the extent of the crosswalk. This makes the crosswalk more visible to motorists in comparison to the standard crosswalk made up of two perpendicular stripes at the intersection.

Raised crosswalks

Raised crosswalks include a speed table at the crosswalk location. This combination serves two purposes: first, it causes motorists to reduce travel speeds when driving over it; and second, it increases motorist awareness of potential pedestrians crossing the street.

Bicycle lanes

Bicycle lanes are on-street bicycle facilities that designate space specifically for bicycles.

Bicycle climbing lane

A bicycle climbing lane is an on-street bicycle lane in the uphill direction. A shared lane marking, rather than a separate lane, is used in the downhill direction. Bicyclists will be able to travel uphill in a space visually separated from vehicles and where they will most likely bicycle at a slower pace, while shared lanes markings in the downhill direction are used where bicyclists are traveling closer to the speed limit. Share lane markings increase motorist awareness of potential bicyclists using the street.



WALKER UPPER ELEMENTARY SCHOOL RECOMMENDATIONS

The Walkabout infrastructure recommendations, organized by location below, represent opportunities to expand the walking and bicycling network so that it will be perceived as more comfortable for bicyclists and pedestrians. The recommendations can be implemented over time so that when complete, they work in conjunction with each other.

Diary Road

- Install high visibility crosswalk crossing Dairy Road and pedestrian crossing signage, east of the bridge at the trail access point
- Install curb ramps that meet ADA guidelines at the proposed crosswalk east of the Dairy Road Bridge
- Consider bicycle and pedestrian improvements to Dairy Road Bridge redesign

Dairy Road and Route 250 Bypass entrance intersection

- Remove left turn lane onto Dairy Road from Route 250 Bypass entrance
- Use space gained by removing the left turn lane to widen sidewalks along both sides of Route 250 Bypass entrance between Dairy Road and Gentry Lane
- Study potential to make intersection a 4-way stop

Gentry Lane and Route 250 Bypass entrance intersection

- Extend curbs on both sides of Gentry Lane as well as along the Route 250 Bypass entrance on the north side
- Install pedestrian refuge island for Route 250 Bypass entrance crossing
- Re-install crosswalk crossing Route 250 Bypass entrance to align with proposed pedestrian refuge island
- Install raised crosswalk crossing Gentry Lane and school zone pedestrian crossing signage
- Relocate flashing school zone beacon to edge of proposed curb extension, before turn

Gentry Lane

- Build new sidewalk along west side of Gentry Lane from Route 250 Bypass entrance to Greenleaf Lane
- Convert eleven perpendicular parking spaces in front of school division administration building into eight parallel
 parking spaces; build three additional parking spaces in area between Walker Upper Elementary and administration
 building
- Reinstall sidewalk in front of administration building into a more direct route
- Install raised crosswalk and school zone signage crossing Gentry Lane between Walker Upper Elementary and administration building
- Install curb extensions at proposed crosswalk in between Walker Upper Elementary and administration building
- Extend sidewalk from Walker Upper Elementary from entrance to school parking lot to reduce street width and allow buses to stop traffic during student loading and unloading times
- Install pedestrian refuge island at parking lot crosswalk
- Install raised crosswalk and school zone pedestrian signage, crossing Gentry Lane south of school parking lot



- Install raised crosswalk crossing and school zone pedestrian signage at the intersection of Gentry Lane and Greenleaf Lane
- Install curb ramps that meet ADA guidelines at crosswalk crossing Gentry Lane at Greenleaf Lane

Oakleaf lane, Del Mar Drive, and Greanleaf Lane intersection

- Consider reducing turning radii using flexible bollards, or by installing curb extensions
- Install sidewalk along west side of Greenleaf Lane from Gentry lane to Del Mar Drive
- Install high visibility crosswalk crossing Greanleaf lane at Gentry Lane intersection
- Install high visibility crosswalk crossing Greenleaf Lane north of Del Mar Drive intersection
- Install high visibility crosswalk crossing Greenleaf Lane south of Del Mar Drive intersection
- Install high visibility crosswalk crossing Oakleaf Lane at Del Mar Drive
- Install high visibility crosswalk crossing Del Mar Drive at Oakleaf Lane

Rose Hill Drive and Oakleaf Lane intersection

- Extend curb at southwest corner of intersection to reduce turning radius
- Install high visibility crosswalk and school zone pedestrian signage crossing Oakleaf Lane
- Install high visibility crosswalks and school zone pedestrian signage crossing Rose Hill Drive

Oakleaf Lane

• Install sidewalk along north side of Oakleaf Lane from Rose Hill Drive to Gentry Lane

Rose Hill Drive

- Install sidewalk to west side of Rose Hill Drive from school's side entrance to Greanleaf Lane
- Install bicycle lanes along Rose Hill Drive from Rugby Avenue to Del Mar Drive
- Install crosswalk crossing Rose Hill Drive and pedestrian crossing signage, north of Del Mar Drive, at the top of hill
- Install curb extensions at proposed crosswalk crossing Rose Hill Drive, north of Del Mar Drive, at the top of hill

Rose Hill Drive and Del Mar Drive intersection

Install curb extensions to northwest and southwest corners of the intersection

Del Mar Drive

• Install climbing lane on Del Mar Drive from Rose Hill Drive to Greenleaf Lane



Programmatic Recommendations

The programmatic recommendations are designed to work in tandem with each other to instill safe walking, bicycling, and driving practices. The recommendations are organized according to the "5E's" of Safe Routes to School: Education, Encouragement, Enforcement, and Evaluation.³

Education

- Incorporate information on walking and bicycling to school in communications with parents. At the beginning of and throughout the school year, provide parents with information to clarify that Walker Upper Elementary School supports walking and bicycling to school. This communication can also be used to suggest ways that parents can support safe walking and bicycling, and promote the social and health benefits of walking and biking.
- Integrate pedestrian and bicycling safety education into the school curriculum. Pedestrian and bicycle safety education will ideally occur in advance of major walk or bike to school events, so that children are adequately prepared and have an opportunity to practice the skills they have learned. The Child Pedestrian Safety Curriculum produced by the National Highway Traffic Safety Administration (NHTSA) is an example a curriculum that might be used for this instruction.
- Provide parents and guardians with safe driving information and materials that stress the importance of driving safely in school zones and being alert for pedestrians and bicyclists during arrival and dismissal. These materials can be provided during back-to-school nights, health and safety fairs, and Safe Routes to School events, among others.

Encouragement

- Participate in statewide walking and biking to school events. International Walk to School Day, held in October, and
 National Bike to School Day, held in May, are used to celebrate walking and bicycling to school. These events provide
 an excellent opportunity to not only get students walking and bicycling, but also to teach them the benefits of an
 active lifestyle.
- Hold formalized walking and biking events once a month to carry over the momentum from International Walk to School Day and National Bike to School Day. Parents can use Greenleaf Park as a park-and-walk location, and maps that show existing sidewalks and signalized intersections can be shared with interested students and parents.

Enforcement

- Create a student safety patrol. A student safety patrol, with the support of the Charlottesville police department, can help enforce safe walking and bicycling behaviors during arrival and dismissal, as well as during walk to school and bike to school events.
- Participate in Crossing Guard Appreciation Month. In Virginia, Crossing Guard Appreciation Month takes place in
 February and gives schools, students, parents, and the community the opportunity to recognize their school's
 crossing guard and to thank them for the service that they provide. Students, parents, and staff at Walker Upper
 Elementary School can recognize their school's resource officer with a special event and parents can nominate her
 as one of Virginia's Most Outstanding Crossing Guards of the Year.

³ The fifth E is Engineering, included in this report under Infrastructure Recommendations



Evaluation

- Conduct Student Travel Tallies. Student Travel Tallies are an effective way to get baseline data for student travel patterns and to track changes in walking and bicycling rates over time. In Virginia, Student Travel Tally Week is in September each year and schools across the state record how students are getting to school. This data can then be used to identify trends and help guide the types of projects that a school's Safe Routes program should develop.
- Administer Parent Surveys. Parent surveys are similar to student travel tallies in that they help a school get a better sense of how students are getting to and from school, but the parent surveys also help collect information on parents' attitudes towards walking and bicycling and reasons why they may or may not allow their children to walk or bike to school. Administering parent surveys at least once a year can help determine whether Safe Routes to School efforts are changing parent's attitudes towards walking and bicycling to school.



Walkabout Photographs

Walkabout participants took photographs to document the walkabout as well as supplement the walkabout project recommendations. The following photos are from the walkabout. All of the walkabout photographs are available at: https://www.dropbox.com/sh/6c8n2lzutjui8c1/AAAyyDTpxzSHDd2Uff4txyWda?dl=0



Figure 1. Gentry Lane and school parking lot, looking south. Pedestrians use the crosswalk in front of the school's parking lot during school hours.



Figure 2. Gentry Lane, looking north. Wide travel lanes on Gentry Lane allow motorists to drive at speeds perceived faster than posted speed limits.



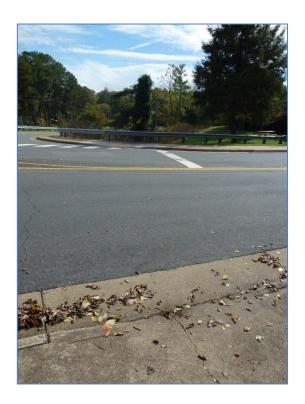


Figure 3. Gentry Lane, south leg of Gentry Lane Route 250 Bypass entrance intersection, looking south. Although there are curb ramps on both sidewalks, there is no crosswalk crossing Gentry Lane.



Figure 4. Gentry Lane Route 250 Bypass entrance intersection, looking northwest. Long crossings, such as the crosswalk crossing the Route 250 Bypass entrance can be uncomfortable for pedestrians.





Figure 5. Intersection of Rose Hill Drive and Oakleaf Lane, looking south. Wide intersections allow motorists to make turns at speeds perceived faster than posted speed limits.



Figure 6. Rose Hill Drive, looking south. Students walk home or to a family vehicle parked along Rose Hill Drive during dismissal.





Figure 7. Gentry Lane, looking south. The Walkabout team assesses Gentry Lane, north of Walker Upper Elementary School.



Figure 8. Dairy Road Bridge, looking east. A bicyclist crosses over Route 250 Bypass using the Dairy Road Bridge.

Walker Upper Elementary School Safe Routes Walkabout - Walkabout Team Walking Routes

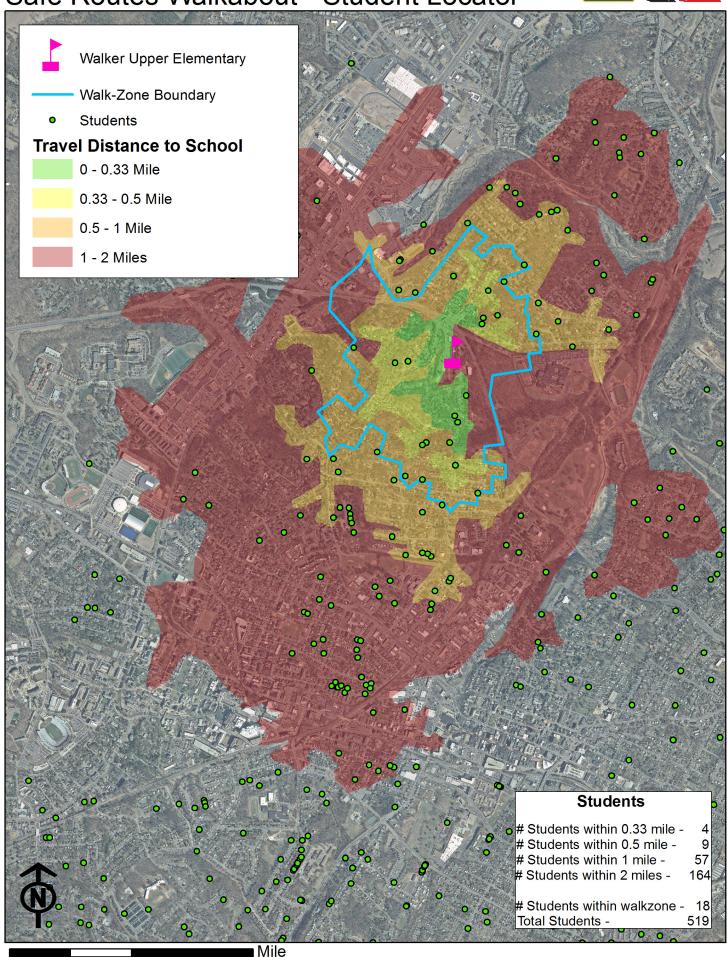




Walker Upper Elementary School Safe Routes Walkabout - Student Locator



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Walker Upper Elementary School Safe Routes Walkabout - Recommendations



