

Cool Spring Elementary School Walkabout Report

Introduction

On March 17, 2021, stakeholders at Cool Spring Elementary School in Mechanicsville, Virginia met to discuss conditions for walking and bicycling to school and identify potential projects to be included in a future infrastructure grant application. Stakeholders also discussed future developments in the neighborhood that will impact access to the elementary school, as well as the adjacent middle and high schools. Their participation in a VDOT Safe Routes to School (SRTS) Walkabout shows their support for improving the walking and bicycling environment and increasing the number of students safely walking and bicycling to school. Meeting participants included the principal, representatives from the Hanover County Sheriff's Office, Virginia Safe Routes to School Program staff members, and representatives from the Virginia Department of Transportation. The names of the Walkabout Team members are listed in Appendix A.



Figure 1 The entrance of Cool Spring Elementary School at dismissal time.

Data Collection

SRTS Walkabouts are traditionally held as a large in-person meeting that includes an observation of school dismissal. To protect the health of Walkabout participants during the COVID-19 pandemic, data was collected via virtual and socially-distanced methods.

To collect information on the existing walking and bicycling conditions on the campus and in the surrounding area, two SRTS Program staff members and one representative from VDOT visited Cool Spring Elementary on March 17, 2021. The staff members also observed school dismissal at a safe distance, joined by the school principal, a parent, and a representative of the Hanover County Sheriff's Office.

An online interactive mapping tool was distributed in advance of the Walkabout meeting for stakeholders to share their thoughts on the existing conditions. The map enabled stakeholders to upload photos, videos, and written comments about walking and bicycling conditions near the school. Their input was reviewed during a virtual meeting on March 25.

During the meeting, Virginia Safe Routes to School Program staff and stakeholders shared additional observations and discussed school division policies, arrival/dismissal procedures, and project priorities.

Existing Conditions

School Location and Demographics

Cool Spring Elementary School is located at 9964 Honey Meadows Road in Mechanicsville, Virginia. It serves 660 students. The school is near the southern end of its attendance boundary in a largely residential area. Adjacent to the school is Chickahominy Middle School and Atlee High School.

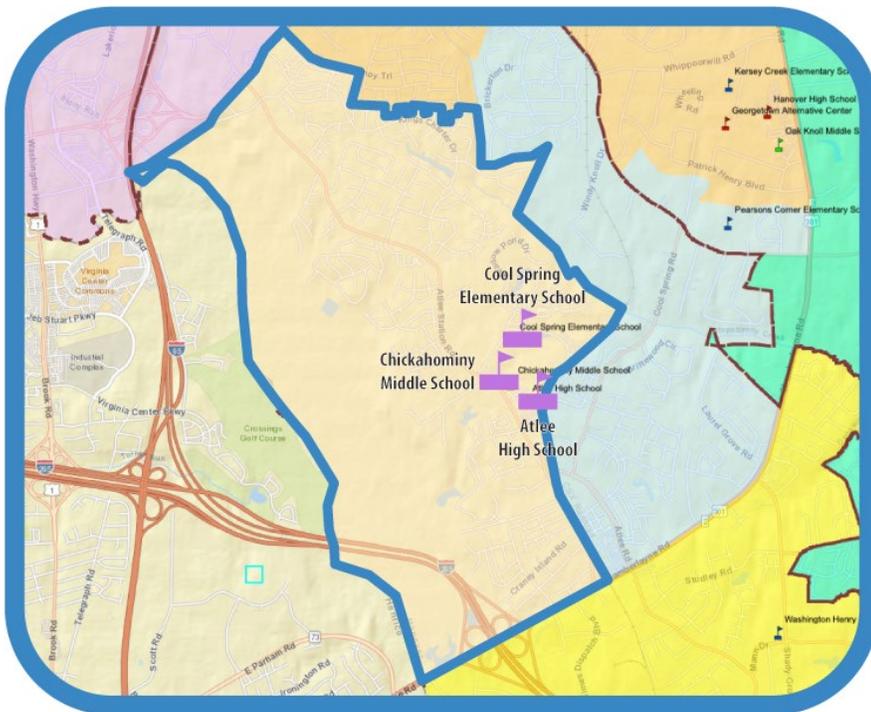
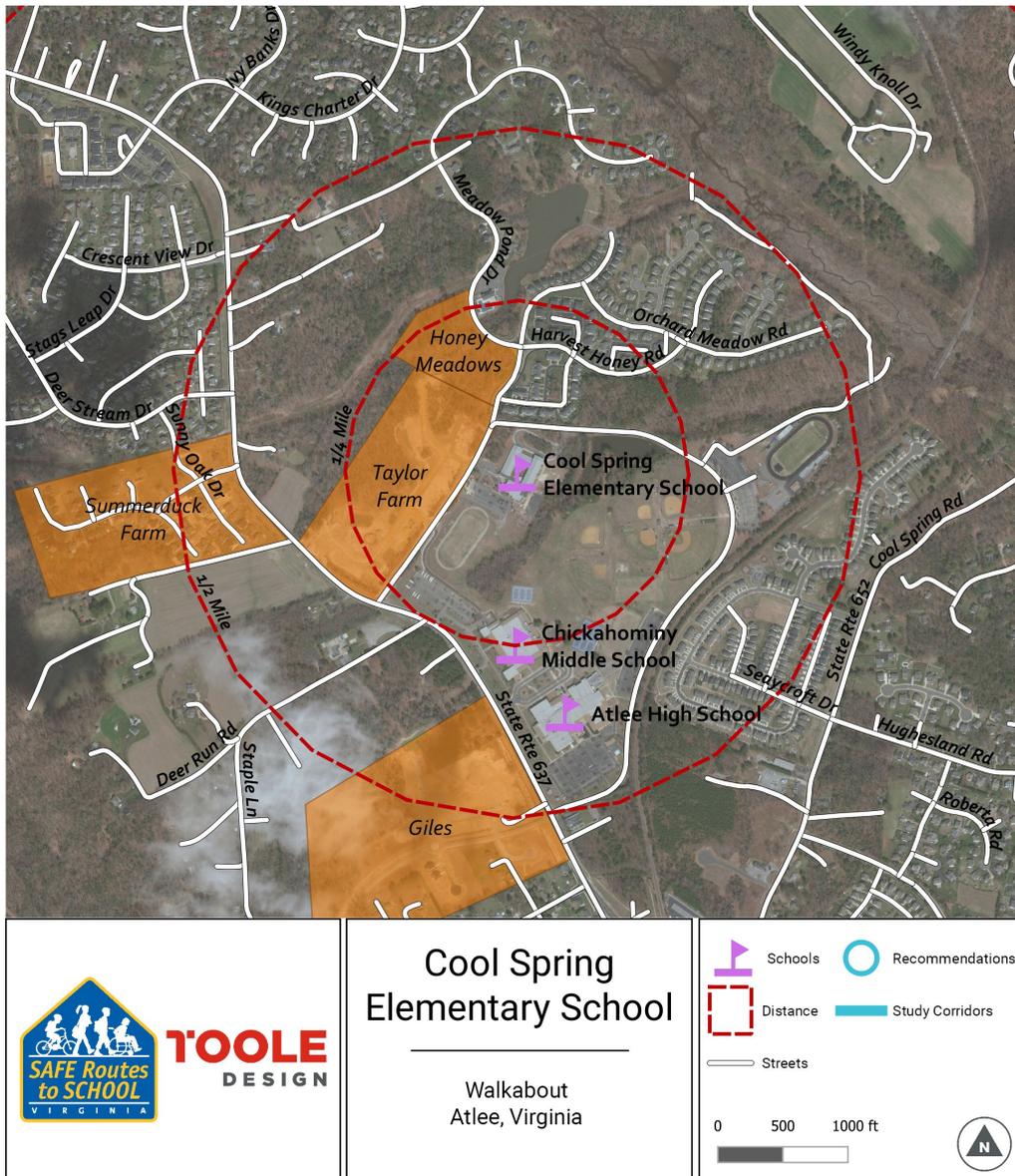


Figure 2 Cool Spring Elementary School catchment area.

Cool Spring Elementary School was built in 1997. Due to COVID-19, about 500 students are attending in-person while 160 students are taking classes virtually. The Walkabout team witnessed roughly 60 students walking or bicycling home, most of whom were assisted by parents or other guardians per school policy. The principal notes that more students have been walking and bicycling due to the pandemic, as well as being driven to school, while fewer students are riding the bus. Travel patterns, as well as the school's processes for arrival and dismissal, are likely to change after the pandemic, when the principal expects more students will ride the bus. School buses are currently not operating to full capacity and are running in multiple shifts to allow all students to travel while social distancing.

The combined elementary, middle, and high school campuses are located at the intersection of a local collector street and an arterial road in a still-developing suburban community, as shown in Figure 3. A newly constructed overpass on Atlee Station Road provides access to residential areas to the south, which are primarily outside the Cool Spring Elementary School catchment area but are served by the middle and high schools. The overpass has sidewalks on one side, and the walkabout team observed middle and high school students using it.



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Figure 3 Map of Cool Spring Elementary School location and surrounding area

Context and Future Development

Cool Spring Elementary School is part of a larger “community school” campus that also contains Chickahominy Middle School, Atlee High School, and recreational facilities associated with all three schools. Cool Spring feeds into the middle and high school, meaning students will attend school here throughout their time in public school. Community members consider the complex a destination both for school activities and local gatherings.

The school is in a fast-growing section of Hanover County, which has resulted in significant change around the school. As shown in Figure 3, there are several new housing developments in various stages of construction nearby, including Summerduck Farm, Honey Meadows, Giles, and Taylor Farm, which is directly across Honey Meadows Road from the school. Community members estimate that over 400 new homes are under construction in the area.

One result of the area’s development has been increased vehicle traffic. Multiple community members noted significant backups in the area when all three schools let out, as pick-up lines for each school back up along Atlee Station Road and Honey Meadows Road. Additionally, Atlee Station Road, which is a quarter-mile south of the school, has recently been reconstructed with multiple new stoplights and an overpass crossing a nearby railroad track. West of Honey Meadows Road, right-of-way has been set aside for widening the road to four lanes.

With several hundred new homes – and with them, a significant number of new families and students – coming to the area, there is an opportunity to “lock in” travel habits for the future. Since the Covid-19 pandemic began, Cool Spring Elementary School has seen a significant increase in walking and bicycling, as families opted to not have their children ride the school bus. New homes nearby mean more students living within walking and bicycling distance, and with safe, comfortable facilities and a supportive culture, those students and their families can be encouraged to walk and bike to school.



Figure 4 A "staging area" for students who walk and bike to and from school

Bicycle and Pedestrian Infrastructure

Despite Cool Spring Elementary School’s success in encouraging students to walk and bike, the area around the school has a limited pedestrian and bicycle network. Hanover County requires new housing developments to provide sidewalks, crosswalks, and other active transportation facilities. The result is a high-quality but incomplete network that is built in pieces, where sidewalks start and stop abruptly or require pedestrians to cross the street to continue.

There are sidewalks on the school’s campus, and a limited sidewalk network connecting it to surrounding neighborhoods. There is no sidewalk in front of the school, but a newly-constructed sidewalk across Honey Meadows Road from the school provides access to



neighborhoods along that street. During dismissal, students and families were observed walking along a well-worn desire path on the school side of Honey Meadows Road. An access road behind the elementary, middle, and high schools lacks a sidewalk, but is generally low-speed and appears to have little vehicle traffic on it.

There are no marked crosswalks between the school and the sidewalk across the street. As a short-term solution, Cool Spring Elementary School used a QuickStart mini-grant to pay for plastic gates that direct walkers to a location where a crossing guard can direct them across the street and signs warn approaching drivers of the crossing. Along Honey Meadows Road, flags were observed at intersections for students to carry across to improve visibility.

Atlee Station Road is an adjacent arterial road that serves Chickahominy Middle School and Atlee High School, but lacks sidewalks in front of both schools. Following the middle and high school dismissal, students were observed walking in the grass or the shoulders along this road. Parents note that students tend to prefer the western or southbound side of the street, which has a wider shoulder but is across the street from both schools. Recent development in the area has resulted in new transportation infrastructure, such as the traffic light at Atlee Station Road and Honey Meadows Road. The Giles development will provide a new sidewalk along Atlee Station Road between the high school and Honey Meadows Road but will have a roughly 200-foot gap past two existing homes.

There are no on-street bicycle facilities in the area, though some newly constructed sidewalks are wide enough to serve as shared-use paths. One popular bicycling route uses an emergency access road between Meadow Pond Drive and Hopkins Branch Way. It connects the Honey Meadows subdivision, adjacent to Cool Spring Elementary, to a neighboring subdivision called Kings Charter, which is generally too far away for students to walk. The path is owned by the Honey Meadows HOA, though responsibility for it is unclear. Community members note that the gate on the path prevents bicyclists from passing through without dismounting, and that the unlit path can be dark during the early morning and evening hours.

Walkabout Summary

After a brief meeting with the principal and Walkabout applicant to review existing dismissal procedures and community concerns, Virginia SRTS staff walked around the school campus to observe dismissal preparations and students' release from both the front and the back of the school. SRTS staff used these observations, as well as information shared in the online mapping tool, to facilitate the discussion of the school dismissal, key issues, and potential opportunities at the online meeting.



Figure 5 Diagram of dismissal at Cool Spring Elementary School

Dismissal Overview

Dismissal begins at 2:05 pm. Walkers and bikers are dismissed first and are released to an area of the parking lot where parents and guardians can wait for them (for younger students) or they can proceed to the marked crosswalk area. Students who ride the bus home are dismissed from the bus loop in the rear of the school, and depart in two shifts, as buses are limited in capacity due to social distancing.

Students riding in cars are dismissed next. As shown in Figure 5, drivers enter the school campus through the main entrance on Honey Meadows Road and follow a path through the parking lot to the pick-up line, which wraps around the front of the school. A school staff member calls students out as each car arrives. The pick-up line was long; the first car in line for pick-up was observed at 1:43 p.m, while the last car departed at 2:38 pm. The line backed up into Honey Meadows Road but generally moved quickly. Chickahominy Middle School and Atlee High School both dismiss students beginning at 3:30pm, though the walkabout team noted that the pick-up lines for both schools had backed up onto Atlee Station Road by the time that Cool Spring Elementary's dismissal had ended.

Crash Data

Between January 2018 and April 2021, there have been 14 crashes in within a half-mile radius of Cool Spring Elementary School. Six occurred during school hours, three with distracted drivers, two with teenage drivers, and one with an older driver. None of the crashes during school hours involved injuries, though community members noted a 2018 fatal crash in Kings Charter, roughly one mile from Cool Spring Elementary, involving a teen driver.

Key Issues and Barriers

The key barriers and issues identified by the Walkabout Team and Virginia SRTS Program staff are listed below. Location specific issues and recommendations are listed on the following pages. For additional information regarding key roadways mentioned in this barriers and issues discussion, including speed limits and annual average daily traffic (AADT), see Appendix B.

Honey Meadows Road

- The walking and bicycling network is incomplete, particularly along Honey Meadows Road, Atlee Station Road, and the school access road.
- There are no crosswalks leaving the school or along Honey Meadows Road, though community members express a desire for high-visibility crosswalks
- Walkabout team members noted that speeding is an issue along Honey Meadows Road, though none was observed during the walkabout. This may have been due to the presence of a police officer and speed sign.
- The roundabout at Honey Meadows Road and Meadow Pond Drive and Harvest Honey Road lacks marked crosswalks, which is especially hazardous as the pedestrian refuges on all four sides are at street-level, reducing protection and visibility.



Figure 6 Students cross Honey Meadows Road, where there is no crosswalk

Atlee Station Road

- Atlee Station Road is a barrier to students living across the road from the three schools, and students who will live across from it in the new Giles development).
- Walkabout team members noted that speeding is an issue along Atlee Station Road, though none was observed during the walkabout.
- Students currently walk on the shoulder on the west side of Atlee Station Road, and frequently cross against the traffic signal at the intersection with Honey Meadows Road, which lacks crosswalks and curb ramps on one



side. Hanover County will require the builder of the Giles subdivision to provide a sidewalk along Atlee Station Road, but it would end south of Honey Meadows Road. A new sidewalk could be built as part of the eventual reconstruction and widening of Atlee Station Road north of Honey Meadows Road.

Kings Charter Path

- An access road between the Honey Meadows and Kings Charter subdivisions was built to provide emergency vehicle access to both neighborhoods, but is primarily used by children biking to school. The path lighting and the locked gate at Hopkins Branch Way prevents bicyclists from accessing the road without dismounting. Walkabout team members discussed redesigning the gates to allow emergency vehicles and bicyclists while prohibiting vehicles, or provided a paved shared use path around the gate that motorists cannot use.

School Access Road

- The access road behind Cool Spring Elementary, Chickahominy Middle, and Atlee High is narrow and lacks sidewalks. Lighting is also an issue, as community members note that the three schools were located together to create a community destination and thus require access at different times of the day, including when it's dark.

A map of the infrastructure recommendations for Cool Spring Elementary School is provided in Figure 7 below. This map is followed by information detailing the issues and recommendations, with photos of existing conditions at each location. A glossary of engineering terms is provided in Appendix D and key state policies supporting the recommendations are highlighted in Appendix E.

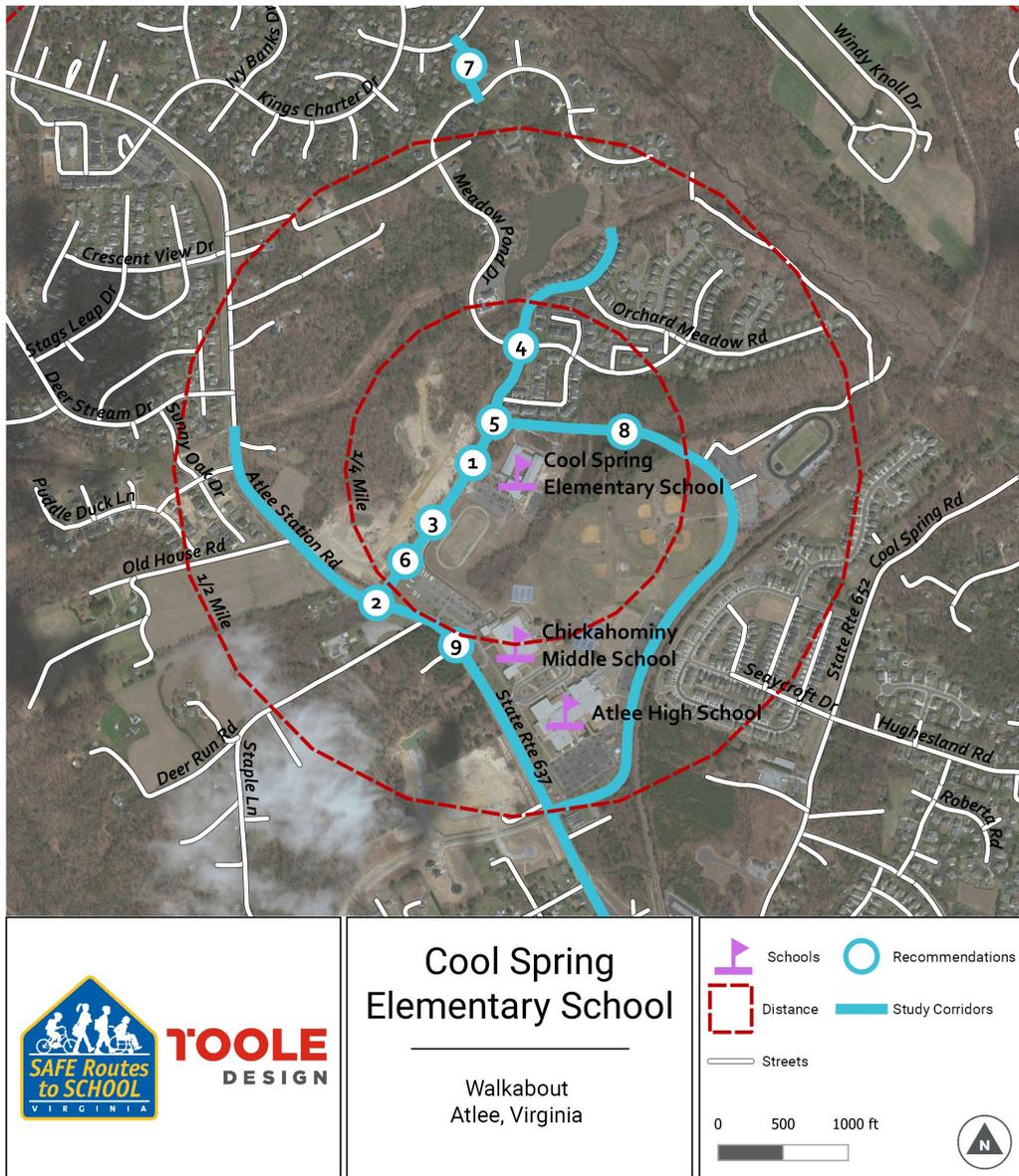


Figure 7 Map of recommendations

Recommendations

Map ID 1: Entrance to School on Honey Meadows Road

Issue: Lack of safe pedestrian crossings

Honey Meadows Road is the primary access for Cool Spring Elementary School and surrounding neighborhoods, making it the main walking and bicycling route for students and their families. The posted speed limit is 25mph. The school's main driveway is on Honey Meadows Road, but there is no sidewalk on the side of the road where the school is, and no crosswalks between the school and the newly constructed sidewalk on the other side of the road. Making this intersection safe and comfortable to walk and bike across is key to encouraging walking and bicycling habits.



Figure 8 There is no crosswalk at the school entrance on Honey Meadows Road

Short-Term Recommendations (1 to 3 years)

- Install a high-visibility crosswalk across Honey Meadows Road where students are currently crossing.
- Replace the painted medians on Honey Meadows Road with a curbed median and pedestrian refuge. Place in-street pedestrian crossing signs to alert drivers of the pedestrian refuge.
- Extend sidewalks from the Cool Spring Elementary School driveway to Honey Meadows Road so students do not have to walk through the parking lot to cross the street.

Long-Term Recommendations (4 to 7 years)

- Construct a sidewalk on the east (school side) of Honey Meadows Road, to replace the existing desire path and allow people to reach the school without crossing the street to use a sidewalk.
- Install a high-visibility crosswalk and curb ramps across both driveways to Cool Spring Elementary School when a sidewalk along Honey Meadows Road is built.

Map ID 2: Honey Meadows Road at Atlee Station Road

Issue: Lack of safe pedestrian crossings

This is the closest major intersection to Cool Spring Elementary and was recently rebuilt to include a traffic signal and new turn lanes on both Honey Meadows Road and Atlee Station Road. It carries significant vehicle traffic, and Atlee Station Road is signed for 45 mph. Today, students walk along the shoulders of Atlee Station because there are no curb ramps or crosswalks on one side of the intersection, nor is there a sidewalk on the southeast corner of the intersection, where all three schools are located. A sidewalk on the east side of Atlee Station Road was recently completed as part of the Taylor Farm development, while a sidewalk on the west side of Atlee Station Road is planned and will be partially built as part of the Giles development.



Figure 9 The crosswalk across Honey Meadows Road at Atlee Station Road

Short-Term Recommendations (1 to 3 years)

- Install high-visibility crosswalks and curb ramps on all three legs of the intersection.

Map ID 3: Honey Meadows Road at Hollythorne Lane

Issue: Lack of safe pedestrian crossings

This intersection connects the newly-constructed Taylor Farm development to a driveway leading to Chickahominy Middle School and, in turn, provides access to Cool Spring Elementary. Drivers tend to speed on this section of Honey Meadows Road outside of school hours, and during dismissal, cars will backup down Honey Meadows Road to this intersection. (There was a police cruiser stationed at this intersection during school dismissal, but the officer's role is not to direct traffic.) There are no crosswalks across Hollythorne Lane, which is the side of Honey Meadows Road where the existing sidewalk is, while there is no sidewalk on Honey Meadows Road connecting to the crosswalk across the middle school driveway. The walkabout team noted that, while there

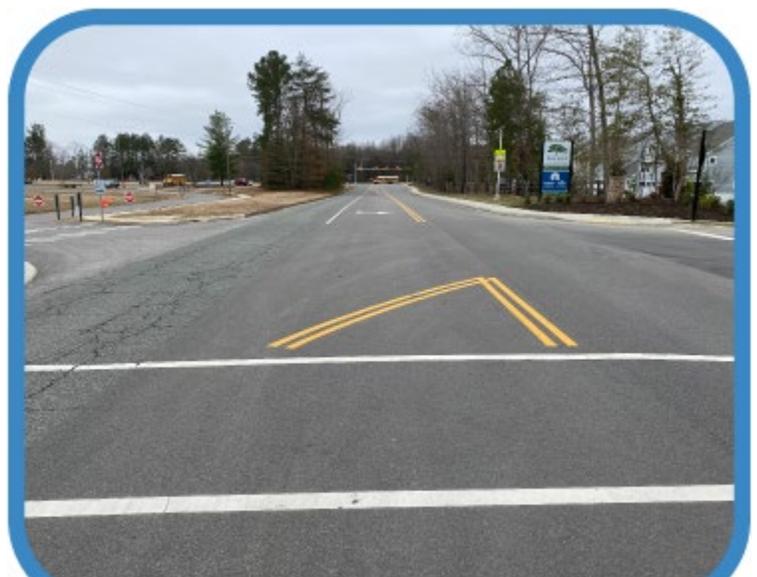


Figure 10 The intersection of Honey Meadows Road and Hollythorne Lane

is a dedicated left-turn lane into Hollythorne Lane, there is likely very little traffic turning left here, which could be an opportunity to create a new crossing island with pedestrian refuge.

Short-Term Recommendations (1 to 3 years)

- Install high-visibility crosswalks on all four legs of the intersection.
- Install curb ramps on the south leg of the intersection where they are missing now.
- Replace the painted median on the north approach to Hollythorne Lane with a curbed median and pedestrian refuge. Place in-street pedestrian crossing signs to alert drivers of the pedestrian refuge.

Long-Term Recommendations (4 to 7 years)

- Consider removing left-turn lane at south approach to Hollythorne Lane and replacing with a pedestrian refuge.

Map ID 4: Honey Meadows Road at Harvest Honey Road/Meadow Pond Drive (the roundabout)



Figure 11 Missing crosswalks at the roundabout

Issue: Lack of safe pedestrian crossings

This intersection is a neighborhood landmark both due to its large roundabout and the adjacent community swimming pool. However, this intersection lacks crosswalks on all four legs, despite the presence of curb ramps and cutouts at all four entrances to the roundabout that could accommodate them. These cutouts serve as de facto pedestrian refuges, but lack any markings to alert motorists of the pedestrian crossing or detectable warning strips to alert vision-impaired users of the roadway crossing. Additionally, the sidewalks leading to the roundabout are incomplete, with sidewalks only on the east side of Honey Meadows Road and the north side of Meadow Pond Drive. The completion of the Honey Meadows and Taylor Farm subdivisions will involve building sidewalks on the southwest corner of this intersection along Honey Meadows Road and Meadow Pond Drive.

Short-Term Recommendations (1 to 3 years)

- Install high-visibility crosswalks at all four legs of the roundabout.
- Resurface all four pedestrian refuges with concrete and install detectable warning strips on each refuge. Place in-street pedestrian crossing signs to alert drivers of the pedestrian refuge.

Long-Term Recommendations (4 to 7 years)

- Complete sidewalks on Honey Meadows Road, Harvest Honey Road, and Meadow Pond Drive leading up to the roundabout.

Map ID 5: Honey Meadows Road at School Access Road



Figure 12 Flags for people crossing at the intersection of Honey Meadows Road and the school access road

Issue: Lack of safe pedestrian crossings

The school access road runs behind all three schools and is used by school buses as well as community members visiting the campus for after-hours activities. The Honey Meadows Road at School Access Road intersection is also the first intersection people walking or biking north from Cool Spring Elementary cross on their way to other neighborhoods. The access road currently lacks crosswalks, and there is a well-worn desire path leading to the intersection from Cool Spring Elementary School.

Short-Term Recommendations (1 to 3 years)

- Reduce the curb radii at the southeast corner of the intersection that reduces speeding while accommodating the turning radii of school buses.

Long-Term Recommendations (4 to 7 years)

When a sidewalk along Honey Meadows Road is completed, install high-visibility crosswalks and curb ramps across the access road and across Honey Meadows Road.

Map ID 6: Honey Meadows Road

Issue: Lack of safe walking and bicycling facilities

Honey Meadows Road is the main way to access Cool Spring Elementary School by all modes of transportation. It is classified as a local road with a speed limit of 25 mph. There are currently no sidewalks on the school side of the street, and there are well-worn desire paths leading away from the school along Honey Meadows Road. Additionally, there is no lighting along Honey Meadows Road, which creates visibility and safety issues for students walking in the early mornings and during inclement weather, as well as for community members visiting the three schools for after-hours events. Hanover County Public Schools owns the land on the school side of the road, and could construct a sidewalk

along the frontage of Cool Spring Elementary and Chickahominy Middle School, filling a significant gap in the sidewalk network.

Short-Term Recommendations (1 to 3 years)

- Construct a shared use path for walking and bicycling along Honey Meadows Road on school property between the access road and Atlee Station Road. It should be a minimum of 10 ft. wide to accommodate pedestrians, joggers, and people using assistive mobility devices.
- Install school zone signage (S5-1 and R2-6P with flashing beacons) with a posted speed limit of 15 mph.



Figure 13 Students and families use desire path along Honey Meadows Road

Long-Term Recommendations (4 to 7 years)

- Complete the sidewalk network on both sides of Honey Meadows Road between Cool Spring Elementary and the roundabout.
- Provide pedestrian-scaled lighting at all crossing locations.
- Provide pedestrian-scaled street lighting to ensure adequate levels in low-light conditions. Proper lighting levels are important for students walking in the early mornings, to and from after-school events, and during inclement weather.

Map ID 7: Kings Charter Path

Issue: Barriers to walking and biking to adjacent development

Kings Charter is a large neighborhood about a half-mile from Cool Spring Elementary with roughly 1,000 homes, and as such, has a significant number of students who bike to school as parts of the neighborhood are too far away to walk. The neighborhood has an extensive sidewalk network, and most of the streets are low-speed and comfortable for bicycling. Between Kings Charter and the adjacent Honey Meadows subdivision is an emergency access road that was built for first responders but has become a popular walking and bicycling path not only for students, but for the broader community.

The path is currently blocked with a gate that keeps drivers out, and first responders have access to open it. A desire path has appeared next to the path for people on bicycles, who must maneuver around the gate. Walkabout team members note that the path is owned and managed by the Honey Meadows homeowners association, which would be responsible for the gate. Whatever changes are made to the gate must use a similar lock, as first responders use the same key for all similar gates in the county. Team members identified other issues with the path, such as overgrown bushes that partially block the path and the desire path and a lack of lighting, creating visibility and safety issues in the early mornings and evenings.

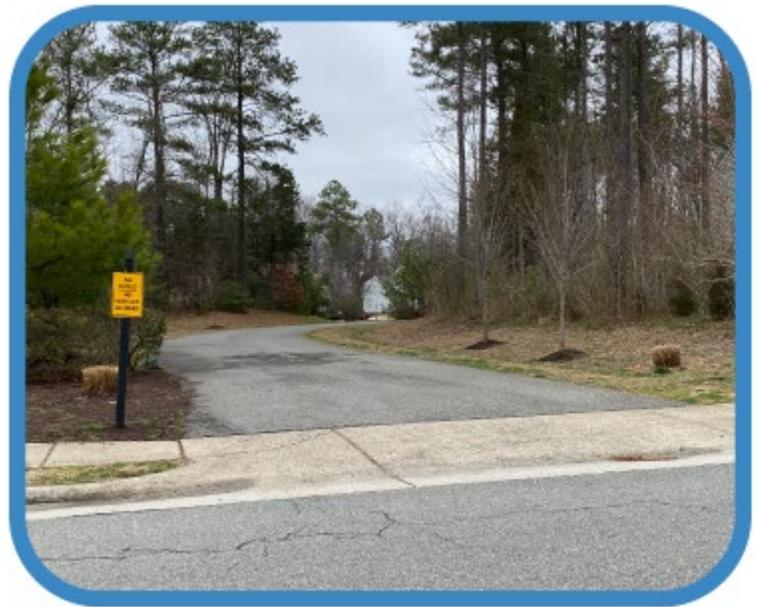


Figure 14 The emergency access path connecting the Honey Meadows and Kings Charter subdivisions

Short-Term Recommendations (1 to 3 years)

- Trim back any vegetation that blocks the path.
- Determine who is responsible for maintaining the gate and develop a solution that restricts motor vehicle access while allowing bicyclists and emergency vehicles to pass through.

Long-Term Recommendations (4-7 years)

- Provide pedestrian-scaled street lighting to ensure adequate levels in low-light conditions. Proper lighting levels are important for students walking in the early mornings and during inclement weather.

Map ID 8: Access Road

Issue: Missing walking and biking connections to adjacent schools

The school access road runs behind Cool Spring Elementary School, Chickahominy Middle School, and Atlee High School. It provides access to the Atlee athletic fields and parking lots and is used by students of all three schools as well as community members visiting the campus for after-hours activities. The road is less than 25 feet wide, with a narrower section where it crosses a bridge over a creek. Outside of parking access and the Cool Spring Elementary School bus loop, there appears to be little traffic on the access road. It has no sidewalks or lighting and does not appear to have a signed speed limit, though it is designed for very low speeds, which makes it more comfortable for walking and bicycling.

Short-Term Recommendations (1 to 3 years)

- Extend the sidewalks along the Cool Spring Elementary bus loop to the access road.
- Install signage (W16-1P) to indicate to drivers that they must share the road with pedestrians and bicyclists.
- Install advisory bike lanes or shoulders to alert drivers that bicyclists may be present on the road.

Long-Term Recommendations (4 to 7 years)

- Construct a sidewalk on the south side of the access road connecting to the Cool Spring Elementary bus loop. At the bridge, this would reduce the width of the drive aisle to make room for a sidewalk.
- Provide a high-visibility crosswalk where the access road sidewalk crosses the bus loop.
- Provide pedestrian-scaled street lighting to ensure adequate levels in low-light conditions. Proper lighting levels are important for students walking in the early mornings and during inclement weather.

Map ID 9: Atlee Station Road

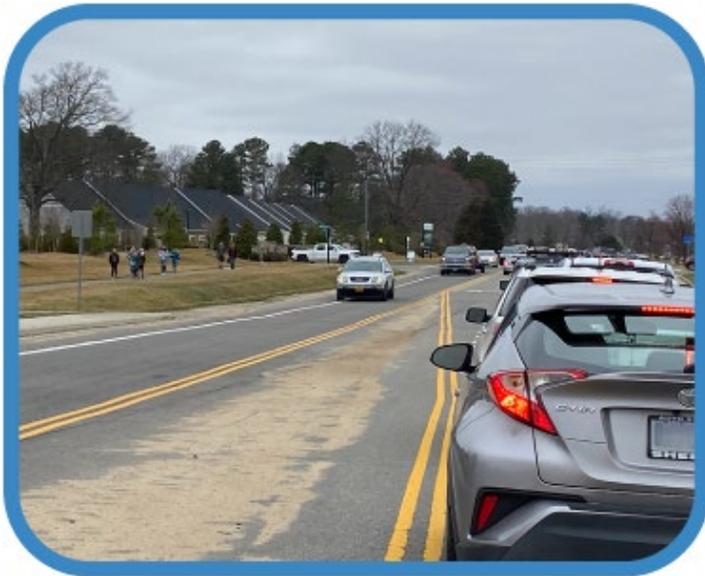


Figure 15 High school students walking along Atlee Station Road

Issue: Missing walking and biking connections to adjacent schools

Atlee Station Road is a major collector road that is signed for 45 mph and carries about 11,000 vehicles per day. It was recently reconstructed in front of all three schools, and long-term plans call for widening it from two through lanes to four through lanes. Today, students walk along the shoulders of Atlee Station because the sidewalks are incomplete. A sidewalk on the east side of Atlee Station Road was recently completed as part of the Taylor Farm development, while one on the west side of Atlee Station Road is planned and will be built as far north as Staple Lane, where the recreation center is located.

Given the high volume of traffic and speeds on this road, the most comfortable place for bicycling will likely be an off-street facility such as a shared use path. Shared use paths are preferable to sidewalks and bike lanes as they provide a more comfortable walking and biking environment that is designed for people of all ages and abilities. Conventional bike lanes that are not horizontally and/or vertically separated from traffic may not be comfortable for younger children or less experienced bicyclists. One initial opportunity to build new shared use paths is in front of the three schools. Hanover County Public Schools owns the land on the school side of the road, and could construct a shared use path along the frontage of Chickahominy Middle School and Atlee High School, filling a significant gap in the sidewalk network.



Short-Term Recommendations (1 to 3 years)

- Construct a shared use path for walking and bicycling along Atlee Station Road on school property between the access road and Honey Meadows Road. It should be a minimum of 10 ft. wide to accommodate pedestrians, joggers, and people using assistive mobility devices.
- Update county and development plans for proposed sidewalks along Atlee Station Road to a shared use path. It should be a minimum of 10 ft. wide to accommodate pedestrians, joggers, and people using assistive mobility devices.

Long-Term Recommendations (4 to 7 years)

- Upgrade sidewalks on the west side of Atlee Station Road to a shared-use path.
- Provide pedestrian-scaled lighting along Atlee Station Road and at any crossings to ensure adequate levels in low-light conditions. Proper lighting levels are important for students walking in the early mornings and during inclement weather.

Programmatic Recommendations

SRTS programmatic recommendations are designed to work in conjunction with each other and the infrastructure recommendations to encourage more students to walk and bicycle to school and instill safe walking, bicycling and driving practices. The recommendations are organized according to the Virginia SRTS Building Blocks : More Students Safely Walking and Biking, Safe Streets, Welcoming Campuses, Safe Behaviors, Supportive Culture, and Equitable and Sustainable Program. http://www.virginiadot.org/programs/resources/safe_routes/2016-2017/Non-Infra_Grants/2021_Program_Building_Blocks_and_Example_Activities_20210407.pdf

Cool Spring Welcoming Campus

Install more bicycle parking. Cool Spring Elementary currently has a well-used bicycle racks on campus. Bicycle racks should be installed at a convenient location near the main entrances, and students who bicycle to school must be able to lock their bicycles securely. Guidance regarding bicycle rack selection and placement is provided in this tip sheet developed by the Safe Routes Partnership.

<https://www.saferoutespartnership.org/sites/default/files/pdf/BikeParkingTipSheet-web.pdf>

Safe Behaviors

Integrate pedestrian and bicycle safety education into the school curriculum. Pedestrian and bicycle safety education should occur in advance of major walk or bike to school events, so students are adequately prepared and have an opportunity to practice the skills they have learned. Two pedestrian safety resources are listed below, and both are free:



- The *Pedestrian Safer Journey* curriculum was developed by the Federal Highway Administration and features videos, quizzes and additional resources for educators teaching pedestrian safety. http://www.pedbikeinfo.org/pedsaferjourney/el_en.html
- *Bikeology* was developed by SHAPE America and the National Highway Traffic Safety Administration. The curriculum includes both knowledge-building lessons and on-the-bicycle lessons to becoming safe bicyclists. The program also provides a guide for parents to support safe bicycling at home. https://www.shapeamerica.org/publications/resources/teachingtools/qualitytype/bicycle_curriculum.aspx

Incorporate information on walking and bicycling to school in communication with parents. For example, communications on arrival and dismissal procedures should highlight procedures and access routes for walkers and bikers.

Provide parents and guardians with safe driving information. This information should stress the importance of driving safely in school zones and being alert for pedestrians and bicyclists during arrival and dismissal. Information can be distributed via email, newsletters, social media, and/or events like back-to-school nights, health and safety fairs, Walk to School Days, or virtual meetings. Several organizations offer free materials on their websites:

- The National Center for Safe Routes to School has a helpful list of “Driving Tips Around Schools: Keeping Children Safe.” http://apps.saferoutesinfo.org/lawenforcement/resources/driving_tips.cfm
- The Federal Highway Administration has an entire website devoted to reducing distracted driving, including information and free downloadable materials. <http://www.distraction.gov/content/take-action/downloads.html>
- The National Safety Council also has a page dedicated to distracted driving resources. Find it here <http://www.nsc.org/learn/NSC-Initiatives/Pages/distracted-driving-resources.aspx>
- The Virginia Safe Routes to School Program has a Zone In, Not Out school zone safety program which includes a safe driver pledge kit and yard signs. Resources are available on the Virginia SRTS website: http://www.virginiadot.org/programs/srts_zone_in_not_out.asp

Implement speed awareness and enforcement strategies to reduce motor vehicle speeds in the school zone. Yard signs (Figure 28), speed feedback devices, and photo enforcement can be used to encourage slow, cautious driving in the school zone. Photo enforcement has recently been enabled by the state of Virginia (See Appendix D. Key Policies Supporting Recommendations). A school zone enforcement area could be implemented at Cool Spring to raise funds for improvements. Yard sign graphics and other school zone safety resources are available on the Virginia SRTS website: http://www.virginiadot.org/programs/srts_zone_in_not_out.asp

Supportive Culture

Participate in International Walk to School Day. Walk to School Day is an excellent opportunity to get students walking, teach the benefits of an active lifestyle, and highlight walking and biking issues. Even if students can’t walk to school, a Walk AT School event can help establish a walking culture. Resources to help plan Walk to School Day are available on the Virginia SRTS Program website. http://www.virginiadot.org/programs/srts_all_website_resources.asp



Help organize and support walking school buses. A walking school bus is a group of children walking to school with one or more adults. It can be as informal as two families taking turns walking their children to school or as structured as a planned route with meeting points, a timetable, and a schedule of trained volunteers. For additional information on walking school buses and bicycle trains, see the following Virginia SRTS Program Webinar recording:

https://www.virginiadot.org/programs/resources/safeRouteResources/5Es/VDOT_SRTS_-_Walking_School_Bus_and_Bike_Train_Webinar.pdf

Establish a frequent walker program. Frequent walker programs encourage students to walk by offering incentives to students who walk frequently or by establishing a competition between classes. A simple record keeping system must be created to track student walking. The Virginia SRTS Program provides a punch card template that can be used for this purpose. http://www.virginiadot.org/programs/srts_marketing_toolkit.asp

Establish a bike library for both middle and high school students. A bike library allows students to temporarily check out a bicycle. Students who do not have a personal bicycle or cannot safely ride their bicycle to school would benefit from a bike library. To create a bike library, the school system should purchase durable bikes that require minimal maintenance and can be adjusted for size. Students can use their student ID or a library card-like system to check out a bike; the system should track usage and record the location of the bikes. A waiver may be necessary to protect the school system from liability. To ensure accessibility for all, the program should be free to students. For examples of local bike libraries, refer to the following links. <https://smcl.org/blogs/post/bike-to-your-library-day-book-a-bike/>
<https://letsmovelibraries.org/wp-content/uploads/2018/05/Book-A-Bike-Chapter.pdf>
<https://www.playcore.com/news/case-study-rural-virginia-community-rediscovers-the-joy-of-bike-riding>

Equitable & Sustainable Program

Begin conducting Student Travel Tallies to get baseline data for student travel patterns. In Virginia, schools across the state record how students are getting to school during Student Travel Tally Week. Student Travel Tally Week normally takes place on a week of the school's choosing in September or October. However, due to the ongoing COVID-19 pandemic, Student Travel Tally Week has been postponed until 2021. Student Travel Tally data can be used to assess progress toward increasing the number of students who walk and bike to school. For more information about Student Tally Week, go to the Virginia SRTS Program website.

http://www.virginiadot.org/programs/srts_student_travel_tally_week.asp

Administer Parent Surveys to 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, especially after recommended infrastructure changes are complete. Administering parent surveys at least every other year can help determine whether Safe Routes to School efforts are changing parents' attitudes towards walking and bicycling to school. For tips on administering Parent Surveys, see the Virginia SRTS Program's **Learn it. Do it. Live it!** tip sheet.

https://www.virginiadot.org/programs/resources/safe_routes/2016-2017/Resources/Parent_Survey_LDLv2.pdf



Appendices

A. Walkabout Participants

Name	Organization
Amy Williams	Principal, Cool Spring Elementary School
Lee Ann Herndon	Parent, Cool Spring Elementary School
Nick Wagner	Hanover County Sheriff's Office
Katherine Graham	VA SRTS Coordinator, VDOT
Dan Reed	VA SRTS Local Technical Assistance Coordinator, Toole Design
Jim Elliott	VA SRTS Local Technical Assistance Coordinator, Toole Design

B. Road Information Table

Street Name	Posted Speed Limit (mph)	Approximate Road Width	No. of travel lanes in each direction	AADT ¹	Road Classification ²
Honey Meadows Road	25	25-50 ft	1	1,100	Local
School Access Road	Not Posted	25 ft	1	Not Available	Local
Atlee Station Road	45	45 ft	1	11,000	Major Collector
Meadow Pond Road/Harvest Honey Road	25	30-35 ft	1	Not Available	Local

C. Planning-Level Cost Estimates

Item	Unit	Low Estimate	High Estimate
Crosswalk	Each	\$20,000	\$30,000
5-foot sidewalk	Per mile	\$313,000	\$1,013,000
10-foot shared use path	Per mile	\$1,120,000	\$1,800,000

¹ Average Annual Daily Traffic (AADT) counts from 2020 VDOT Daily Traffic Volume Estimates, <https://www.virginiaroads.org/datasets/traffic-volume>

² Road classification from VDOT, http://www.virginiadot.org/projects/fxn_class/maps.asp



D. Glossary of Infrastructure Terms

The following infrastructure treatments can be used to improve the bicycle and pedestrian environment around Cool Spring Elementary School. Location-specific recommendations are referenced under the section, Infrastructure (Engineering) Recommendations

Crosswalks

Marked crosswalks highlight the portion of the right-of-way where motorists can expect pedestrians to cross and designate a stopping or yielding location. They also indicate to pedestrians the optimal or preferred locations to cross the street. At midblock or other uncontrolled locations, crosswalks should use a high-visibility pavement marking pattern and be accompanied with pedestrian crossing signs that meet current Manual on Uniform Traffic Control Devices (MUTCD) standards. In addition, crosswalks can be raised on a speed table to be level with the sidewalk. This design helps slow drivers, increase pedestrian visibility and make it easier for pedestrians with mobility limitations to cross the street.

Curb Ramps

Curb ramps provide access between the sidewalk and roadway for people using wheelchairs, strollers, and bicycles. Curb ramps must be installed at all intersections and midblock locations where pedestrian crossings exist, as mandated by the 1990 Americans with Disabilities Act. In most cases, a separate curb ramp for each crosswalk at an intersection should be provided rather than a single ramp at the corner for both crosswalks. Current guidelines for curb ramp designs are included in the Public Right-of-Way Accessibility Guidelines, Chapter R3: Technical Requirements. (<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapter-r3-technical-requirements>)

Crossing Islands

Crossing islands are raised median islands placed in the center of the street at intersection approaches or midblock. They allow pedestrians to cross one direction of traffic at a time by enabling them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street. They can reduce crashes between vehicles and pedestrians at uncontrolled crossing locations on higher volume multi-lane roadways where gaps are difficult to find, particularly for slower pedestrians, e.g. disabled, older pedestrians, and children. The application would need to be studied before implementing crossing islands on state roads.

High-Visibility Crosswalks

While standard crosswalks use transverse lines (two parallel lines), high-visibility crosswalks also use bar-pairs, ladders, longitudinal lines, or zebra patterns to improve detection of the crosswalk.

In-Street Pedestrian Crossing Signs

In-street pedestrian crossing signs placed in the roadway at pedestrian crossing locations warn drivers and encourage yielding.



Manual on Uniform Traffic Control Devices (MUTCD)

This document produced by the Federal Highway Administration specifies the standards that traffic signals, signs, and roadway markings must adhere to including shapes, colors, fonts, and placement. The *2011 Virginia Supplement to the MUTCD* contains standards and guidance specific to Virginia.

Pedestrian Lighting

Lighting should be provided near transit stops, commercial areas, or other locations where night-time or pre-dawn pedestrian activity is likely. Pedestrian-scale lighting such as street lamps helps illuminate the sidewalk and improves pedestrian safety and security.

Public Right-of-Way Accessibility Guidelines (PROWAG)

The United States Access Board produces guidelines to ensure all pedestrians have equal access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

School Speed Limit Signs

School speed limit signs alert drivers that they are entering a school zone and need to prepare to yield to students that may be crossing the street. School speed limits vary based on local laws and typically range from 15 to 25 mph. School speed limit signs with lights that flash (flashing beacons) during arrival and dismissal times can be more effective on busy streets, however, all school speed limit zones require occasional police enforcement to ensure driver compliance. Refer to the Manual on Uniform Traffic Control Devices (MUTCD) for more guidance.

Sidewalks

Sidewalks provide pedestrians and younger bicyclists a safe place to travel that is separate from motor vehicles. It is important to provide a continuous sidewalk route, connected with high-visibility crosswalks so that pedestrians are not forced to share travel space with motor vehicles. All sidewalks should meet ADA guidelines for width and cross-slope and include curb ramps that meet ADA guidelines at street crossings.

Traffic Calming

Traffic calming measures are designed to improve safety for motorists, pedestrians and bicyclists, usually by altering the physical design of the roadway to reduce motor vehicle speeds. Common traffic calming measures include speed tables, curb extensions, chicanes, and neighborhood roundabouts.



E. Key Policies Supporting Recommendations

VDOT Crosswalk Policy VDOT IIM-TE-384.03

VDOT's crosswalk policy states that potential advantages of marked crosswalks include:

- Providing a visible reminder to motorists that pedestrians may be present.
- Directing pedestrians to the location of the recommended crossing path.
- Reducing the likelihood that drivers will encroach the intersection or block pedestrian traffic when stopping for a STOP or YIELD sign
- Designating the location of approved school crossings or crossings along recommend school routes

For marked crosswalks at stop-controlled intersections, relevant criteria are provided in Section 5.2 of the policy, including:

- The crossing is part of a walking route approximately ¼ mile or less between a residential development of moderate or heavy density and a school or recreational area,

For marked crosswalks at uncontrolled intersections, relevant criteria are provided in Section 5.3 of the policy, including:

- The crossing is on a direct route between significant pedestrian generator(s) and attractor(s), where engineering judgment determines that the crosswalk would likely see a minimum of 20 pedestrians/bicyclists using the crosswalk in an hour. That threshold may be reduced to 10 pedestrians per hour if the crossing is expected to be used by a high number of vulnerable pedestrians (pedestrians who are disabled, age 65 and over, or age 15 and under), or if the reduced volume is met for three consecutive hours.
- The location is 300 feet or more from another marked crosswalk across the same road.
- Drivers will have an unrestricted view of the entire length of the crosswalk, including the waiting areas at either end of the crosswalk.
 - 25mph = 155 feet on level grade
 - 35 mph = 250 feet on level grade
- The required engineering study determines that the introduction of a marked crosswalk will not produce an unacceptable safety hazard.

HB 1442 Photo speed monitoring devices; civil penalty.

Summary as enacted with Governor's recommendation

Photo speed monitoring devices; civil penalty. Authorizes state and local law-enforcement agencies to operate photo speed monitoring devices, defined in the bill, in or around school crossing zones and highway work zones for the purpose of recording images of vehicles that are traveling at speeds of at least 10 miles per hour above the posted school crossing zone or highway work zone speed limit within such school crossing zone or highway work zone when such zone is indicated by conspicuously placed signs displaying the maximum speed limit and that such photo speed

³ http://www.virginiadot.org/business/resources/IIM/TE-384_Ped_Xing_Accommodations_Unsignalized_Locs.pdf



monitoring devices are used in the area. The bill provides that the operator of a vehicle shall be liable for a monetary civil penalty, not to exceed \$100, if such vehicle is found to be traveling at speeds of at least 10 miles per hour above the posted highway work zone or school crossing zone speed limit by the photo speed monitoring device. The bill provides that if the summons for a violation is issued by mail, the violation shall not be reported on the driver's operating record or to the driver's insurance agency, but if the violation is personally issued by an officer at the time of the violation, such violation shall be part of the driver's record and used for insurance purposes. The bill provides that the civil penalty will be paid to the locality in which the violation occurred if the summons is issued by a local law-enforcement officer and paid to the Literary Fund if the summons is issued by a law-enforcement officer employed by the Department of State Police. This bill incorporates HB 621 and HB 1721.

[Click here for link to full text of enacted bill.](#)