Introduction

On November 2, 2018, stakeholders at Saint Patrick Catholic School in Norfolk, Virginia met to examine the walking and bicycling networks around the school and identify potential improvements to be included in a future Transportation Alternatives Program or other infrastructure grant application. 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.

The stakeholders participating in the walkabout included the principal, a school security officer, a parent of two Saint Patrick students, two students, a member of the school's board, the Norfolk Public Schools Safe Routes to School Coordinator, an officer from the Norfolk Police Department, three representatives from the City of Norfolk's Department of Public Works, a Norfolk City Councilwoman, and representatives from the Virginia Department of Transportation's Safe Routes to School Program.

Additionally, there were several representatives from Larchmont Elementary School, which is located one block from Saint Patrick and was invited to participate in the walkabout as they share many common issues. Larchmont Elementary representatives included the school counselor, and three PTA members, one of whom was also president of the Larchmont Civic League, a neighborhood group, and another who was Director of Transportation at Old Dominion University, which is located across Hampton Boulevard from the two schools.

The names of the Walkabout Team members are listed in Appendix A. The two-hour meeting included an observation of school dismissal and a brief observation of conditions on adjacent streets, including Bolling Avenue, Westmoreland Avenue, and Hampton Boulevard.
Existing Conditions

School Location and Demographics
Saint Patrick Catholic School is located at 1000 Bolling Avenue, Norfolk, Virginia 23508. It is a private religious school serving 420 students in grades pre-K through 8. It has no fixed attendance zone, with many of its students coming from the four affiliated Catholic parishes nearby. About 12 percent of the student population lives within a one-mile radius of the school, 10 percent between one and two miles of the school, and 78 percent live more than two miles away. The school does not collect information on how many students walk or bicycle to school, though students were observed walking and bicycling away from the school during the walkabout. Parents report that students who live close to the school do walk and that bicycling is popular in the neighborhood, particularly for students living further from the school, and that most students ride on the sidewalk.

Larchmont Elementary School is located at 1145 Bolling Avenue, one block west of Saint Patrick. Its attendance zone consists of a peninsula surrounded on three sides by water and bounded on the south side by West 38th Street. Most of the catchment is within one mile of the school. In October 2018, student travel tallies for Larchmont report that of 889 students, 48 to 53% of students are driven or ride a carpool to school, 24-28% walk, 14-15% ride the school bus, and 5-6% bike.

Both schools are located in an area of west central Norfolk called Larchmont, an older neighborhood with a dense street grid. The port of Norfolk and Naval Station Norfolk, a military base, are located three miles to the north, and downtown Norfolk is located three miles to the south.

Programming
Saint Patrick Catholic School has several existing programs designed to encourage walking and bicycling and make it safer. A Traffic Safety Committee consisting of parents and staff is responsible for making policy for the school, including education, encouragement, and enforcement. As an independent school, the administration and board are empowered to make physical changes to the campus, and to directly engage with city officials regarding adjacent streets.

Larchmont also works to encourage walking and bicycling to school and participated in Walk to School Day and Bike to School Day in 2018.
Figure 3: Area within 2 miles of Saint Patrick Catholic School and Larchmont Elementary School
Figure 4: Map of Larchmont Attendance Zone
Figure 4: Generalized Locations and Numbers of Students Living Within Two Miles of Saint Patrick Catholic School
Pedestrian and Bicycle Infrastructure
The street network around Saint Patrick Catholic School and Larchmont Elementary School is an urban street grid, with many connecting streets. Many, though not all, streets have sidewalks and crosswalks, such as Bolling Avenue; however, other streets students may use to access both schools lack sidewalks on one or both sides. Notable sidewalk and crosswalk gaps near the schools include:

- Bolling Avenue (north side) between Monroe Place and Hampton Boulevard
- Hampton Boulevard at Bolling Avenue (north leg)
- Monroe Place (west side) between Bolling Avenue and Rockbridge Avenue
- Westmoreland Avenue (both sides) between Bolling Avenue and Monroe Place

There are no marked bike lanes nearby, though shared lane markings (sharrows) are present along Jamestown Crescent and Colley Avenue, one block east of Saint Patrick. Saint Patrick has bicycle racks located within a secure area behind a gate, while Larchmont has bicycle racks in front of the school.

Bodies of water to the north and south of both schools create barriers that students must travel around to get to school. Many students would have to travel on or across one of two main roads that are the only way on or off the peninsula and carry significant traffic: Jamestown Crescent/Colley Avenue and Hampton Boulevard. While Jamestown Crescent/Colley Avenue is a more residential street with lower speed limits, Hampton Boulevard is a six-lane state highway that carries traffic to and from the Port of Norfolk. Bolling Avenue is the only signalized crossing near both schools, and stakeholders have reported multiple crashes or close calls at or near this intersection.

According to the TREDS (Traffic Records Electronic Data System) crash database, in 2018 seven crashes occurred at three intersections near Saint Patrick Catholic School and Larchmont Elementary School. Three crashes were at or near the intersection of Hampton Boulevard and Bolling Avenue, two of which occurred during the school day. One of those two crashes involved an injury. There were two crashes at the intersection of Bolling Avenue and Jamestown Crescent, one of which occurred during the school day and involved an injury. Additionally, two crashes occurred at the intersection of Hampton Boulevard and Buckingham Avenue, one of which occurred during the school day and involved an injury. Data from the past six years indicates a similar trend.

Walkabout Team members identified several major roads that present barriers to students coming to and leaving from both schools:

- Westmoreland Avenue
- Hampton Boulevard
- Bolling Avenue
- The “Five Points” intersection (Westmoreland Avenue, private alley parallel to Westmoreland Avenue, Buckingham Avenue, and the Saint Patrick lower school driveway).
Walkabout Summary

After a brief meeting to review existing dismissal procedures and community concerns, the Walkabout Team observed the dismissal process at both schools. Two groups observed the Saint Patrick dismissal: one from the entrance on Bolling Avenue, where middle school students depart, and one from the entrance on Westmoreland Avenue, where lower school students depart. Two other groups observed the Larchmont Elementary School dismissal from the intersections of Bolling Avenue and Monroe Place and Bolling Avenue and Westmoreland Avenue.

Arrival and Dismissal Overview

Classes begin at 8:00 a.m. and end at 3:15 p.m. for lower school students (Pre-K to 5th grade) and 3:30 p.m. for middle school students (6th to 8th grade). Students begin arriving at Saint Patrick between 6:30 and 7:30 a.m. for before care, but most students arrive between 7:30 a.m. and 7:50 a.m., when a line of cars forms outside both entrances. Students may stay for after school programs as late as 6:00 p.m.

Lower school students leaving by car are dismissed from the entrance on Westmoreland Avenue, while middle school students leaving by car, and lower school students with middle school siblings, depart from the entrance on Bolling Avenue. Parents arriving by car queue up in the driveway of each entrance to pick up their children. Each vehicle has a placard in the window with the family’s name and students’ ages. As each vehicle arrives, an adult stationed outside the building will read off the name via radio to another adult inside the building, who then allows the student or students to head out to their family’s car. During the walkabout, observers noted that the queue extends past the driveway and into Bolling Avenue.

Students leaving by foot or bicycle are dismissed at the same time as other students. Walkers leave through the front entrance on Bolling Avenue, while students on bicycles can leave from either entrance, though the school’s bike racks are located in a secure area by the Westmoreland Avenue entrance. School policy allows students in grades 4 and above to walk home unescorted, for distances up to one mile (two miles if they bicycle). Permission can also be granted on a case-by-case basis when requested by a parent or guardian.

Crossing guards for both schools are stationed at the intersection of Bolling Avenue and Hampton Boulevard. Saint Patrick does not provide bus service for its students.

Classes at Larchmont Elementary School begin at 8:55 a.m. and students are dismissed at 3:20 p.m. from its entrance on Bolling Avenue. The school provides buses to students living too far to walk, including areas to the south of the Jamestown Crescent/Colley Avenue bridge, south of the Old Dominion University campus, and some streets west of Hampton Boulevard where students would have to cross the busy road.
Team observations included the following. See below for the referenced photographs, and Appendix E for additional photographs.

- Ten students left Saint Patrick’s Bolling Avenue entrance on foot, and an additional 4 students left the Westmoreland Avenue entrance on foot. Nearly all of the students headed west on Bolling or north on Westmoreland. One student headed east on Bolling towards Colley Avenue.
- A car broke down in the driveway (Figure 6), causing the queue to back up onto Bolling Avenue, at one point reaching the intersection with Colley Avenue. While the breakdown isn’t a common occurrence, parents and staff report that the resulting queue is common.
- Several cars parked illegally along Bolling Avenue (Figure 7), including in a marked “No Parking” zone. Parents noted that this does calm traffic, making it safer to cross, but also causes a bottleneck.
Most students went to parked or standing cars in the school’s driveway (Figure 8). While the school’s policy is to dismiss students only when their ride has arrived, some students did walk to cars waiting in the queue on Bolling Avenue, not in the driveway. Parents also left their vehicles in the queue to meet their children.

At Larchmont Elementary School, all students on foot are required to walk west to the crosswalk at Monroe Place, then double back if they are traveling east (Figure 9).

There are no marked crosswalks at the driveway on Bolling Avenue, which has slip lanes for right turns in and out of the school. Standing cars frequently blocked the areas where students would have to cross the driveway, or Bolling Avenue.
Following the dismissal observation, the Walkabout Team walked west on Bolling Avenue to get a sense of walking conditions there and on Hampton Boulevard. The group’s observations and recommendations are presented below.

**Key Barriers and Issues**

The key barriers and issues identified by the Walkabout Team and Virginia SRTS Program staff are listed below, with location specific issues and recommendations 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 the Appendix.

- **Missing Sidewalks**—The sidewalk network is incomplete and there are notable gaps near the school, as indicated in the Pedestrian and Bicycle Infrastructure section on page 6.
- **Difficult Crossings**—Several of the pedestrian crossings near the school could be modified to improve pedestrian safety and comfort. Issues include missing, insufficient, or faded crosswalk markings; long pedestrian crossing distances; and relatively high motor vehicle speeds and volumes.

**Infrastructure (Engineering) Recommendations**

A map of the infrastructure recommendations for Saint Patrick Catholic School and Larchmont Elementary School is provided below. This map is followed by tables detailing the issues and recommendations at each location. A glossary of engineering terms is provided in Appendix C and key policies supporting the recommendations are highlighted in Appendix D. The recommendations below are each listed with the following time frames:

- Short – within 2 years
- Medium – between 2 and 5 years
- Long – more than 5 years
- Ongoing – as appropriate based on other work
Figure 10: Infrastructure Recommendations Map
### “Five Points” (Westmoreland Avenue and Buckingham Avenue)

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<tr>
<th>Map ID</th>
<th>Issue</th>
<th>Recommendation</th>
<th>Timeframe</th>
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| 1     | **Difficult Crossing.** This is the intersection of five roads, which creates poor sight lines and visibility. Westmoreland Avenue in front of Saint Patrick is one way northbound, and parents leaving the campus will either illegally drive south on that block or use a parallel service road for the adjacent Larchmont Apartments. As a result, students on foot or bike and drivers cannot always see oncoming traffic or predict the movements of vehicles in the intersection. | • Using flex posts, extend the median between Westmoreland Avenue and the service road, with an extension that prevents turns onto the service road from Westmoreland.  
• Make the service road one-way southbound and use the extended median to restrict vehicles only to right turns in from Buckingham Avenue.  
• Use curb extensions at the northeast and northwest corners of the intersection to reduce the crossing distance and calm traffic. Flex posts can be used here, though curbing would allow the sidewalk to be extended without removing existing trees. | Short     |
| 2     | **Unmarked Crossings.** There are no crosswalks on the east leg (across the Saint Patrick driveway) or west leg (Buckingham Avenue).                                                                                                                                     | • Install crosswalks and ADA compliant curb ramps on the east, north, and west legs of this intersection and add pavement markings to direct drivers where to turn and where to stop.  
• Extend the proposed sidewalk into the school driveway and connect the existing crosswalk within the school driveway to the existing sidewalk with an ADA compliant curb ramp. | Short     |
| 3     | **Missing Sidewalk.** There are no sidewalks along Westmoreland Avenue between Bolling Avenue and Monroe Place. The right-of-way is narrow and hemmed in by hedges alongside Saint Patrick’s ballfields, and many students walk in the street or in the grass. Saint Patrick installed a gate in the fence on Monroe Place to allow students to walk through the ballfields instead of in the street. | • Work with the City of Norfolk to identify the right-of-way for a sidewalk along Westmoreland Avenue. There may be room for a 6’ sidewalk, but it would require removing or relocating the hedges.  
• Consider a right-of-way dedication from the school easement to allow a wider sidewalk, or a sidewalk with a landscaped buffer. Removal of the gate at Monroe Place and portion of the fence at Bolling Avenue would be recommended in this instance. | Medium/Long |
Figure 10: Recommendations #1, #2, and #3 for Five Points (Westmoreland Avenue and Buckingham Avenue)
### Bolling Avenue and Westmoreland Avenue

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<th>Map ID</th>
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<th>Recommendation</th>
<th>Timeframe</th>
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| 4      | **Difficult Crossing.** This intersection is a crucial link for students at Saint Patrick and Larchmont, as well as people trying to reach the playground on the south side of Bolling Avenue. There are no crosswalks across Bolling; there is a curb ramp on the southeast corner, but none on the other side. Figure 29 in Appendix E shows existing conditions at this intersection. | • Install a crosswalk on the east and west sides of the intersection, including sidewalk connections and ADA compliant curb ramps. Consider high-visibility or raised crosswalks to increase driver attention and slow traffic. The northwest corner is partially outside the public right of way and will require coordination with adjacent property owners.  
• Reconstruct the curb ramp on the southeast corner to the west, so the crosswalk can line up with the future sidewalk on the east side of Westmoreland Avenue. This will require relocating a utility pole and possibly removing a tree.  
• Reconstruct the curb ramp on the northwest corner to be ADA compliant.  
• Shift the stop sign at the end of the private driveway to the right side, instead of between the driveway and the public right-of-way for Westmoreland Avenue. | Medium |

### Bolling Avenue and Rockbridge Avenue

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| 5      | **Difficult Crossing.** This intersection is the main entrance to Saint Patrick, with wide slip lanes that are a legacy of the former apartment complex on this site. Drivers use the eastern slip lane as a queue during arrival and dismissal. However, the slip lanes create three separate crossings along Bolling Avenue, none of which have marked crosswalks. Additionally, outside of arrival and dismissal, they may encourage drivers to speed on Bolling Avenue or make right- and left- turns without slowing down. | • Remove both slip lanes, initially by striping them off and installing flex posts, and later on by removing the asphalt and extending the curbs. This may require tree removal.  
• Review the queueing procedure during arrival and dismissal. There may actually be more room for the queue along Rockbridge and Bolling by eliminating the slip lanes.  
• Install crosswalks and ADA compliant curb ramps on the north, east and west legs of the intersection, preferably high-visibility or raised crosswalks. Crosswalks | Medium |
Figure 7 shows existing conditions at this intersection. Across Bolling Avenue may require realigning the sidewalks leading out from the school entrance.

Figure 11: Recommendation #5 for Bolling Avenue and Rockbridge Avenue
### Bolling Avenue and Jamestown Crescent

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| 6      | **Difficult Crossing.** Jamestown Crescent/Colley Avenue is a main route for students who live off the peninsula, but this intersection only has crosswalks on two legs, both of which are the traditional “parallel bars” crosswalk that can be difficult to see. | • Replace the crosswalks with high-visibility crosswalks on the north and west legs of the intersection and consider installing a high-visibility crosswalk and a RRFB (Rectangular Rapid Flashing Beacon) on the south leg to reduce the number of crossings Larchmont Elementary need to cross to reach the school.  
• Provide a curb extension on the south side of Bolling Avenue to reduce the pedestrian crossing distance across Bolling Ave.  
• Consider reconstructing the curb with a smaller corner radius on the southwest corner to reduce the speeds of turning vehicles. Consider also realigning the crosswalk to provide two separate curb ramps on the northwest corner to replace the existing diagonal curb ramp. | Short, Medium |

### Bolling Avenue and Monroe Place

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| 7      | **Difficult Crossing.** This intersection is across from Larchmont Elementary School and the place where all students must arrive or depart from Larchmont. However, the angle of Monroe Place has poor sightlines for drivers turning onto Bolling, and drivers coming from Hampton Boulevard often speed through this intersection.  
Figure 30 in Appendix E shows existing conditions at this intersection. | • Add yield markings (“shark’s teeth”) on the west leg of the intersection to indicate to eastbound drivers where they must yield to pedestrians crossing Bolling Avenue.  
• Extend the curb on the northwest corner of Monroe Place and Bolling Avenue, so drivers turning now face the crosswalk and can see pedestrians. This can be done with flex posts and paint in the interim before a permanent extension is built. | Medium |
| 8      | **Missing Sidewalk.** There are no sidewalks on the north side of Bolling Avenue west of Monroe Place. | • Install sidewalks on Bolling Avenue. | Medium |
**Missing Sidewalk.** There are no sidewalks on the west side of Monroe Place between Bolling Avenue and Rockbridge Avenue.

- Install sidewalks on Monroe Place. An alternative recommendation would be to provide a curb extension and crosswalk at Brunswick Avenue and Monroe.

**Figure 12: Recommendations #7, #8, and #9 for Bolling Avenue and Monroe Place**
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<th>Map ID</th>
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| 10    | **Difficult Crossing.** Westmoreland Avenue has three separate intersections with Monroe Place, creating poor sightlines and conflicts between turning vehicles and pedestrians. There are no crosswalks at this intersection. | • Install high visibility crosswalks and ADA compliant ramps on the east and west legs of the intersection (Westmoreland Avenue) and across Monroe Place.  
• Curb extensions can be considered on the southern corner of the Westmoreland Avenue / Monroe Place intersection to shorten both crossing distances. | Short/ Medium     |

Figure 13: Recommendation #10 for Westmoreland Avenue and Monroe Place
### Hampton Boulevard and Bolling Avenue

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<th>Map ID</th>
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<th>Recommendation</th>
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| 11     | Difficult Crossing. Stakeholders at both Saint Patrick and Larchmont have reported unsafe conditions at this intersection. Hampton Boulevard is the main truck route to the Port of Norfolk, with heavy traffic volumes, high speeds, and frequent crashes. The intersection at Bolling Avenue is the only signalized crossing that students can use to walk to both schools. Figures 20 and 22 in Appendix E show existing conditions at this intersection. | • Reduce the curb radii on the northwest and southeast corners to reduce the speeds of turning vehicles at pedestrian crosswalks.  
• Change the signal phasing for the northbound approach to provide protected-prohibited phasing that eliminates conflicts between turning vehicles and pedestrians crossing Bolling Avenue  
• Add No Right Turns on Red signs to reduce conflicts between turning vehicles and pedestrians in the crosswalk.  
• Add a leading pedestrian interval (LPI), giving people on foot a head start on crossing the street before vehicles get the green light.  
• Add a crosswalk on the north leg of Hampton Boulevard to connect to a sidewalk on the north side of Bolling Avenue. | Long |
Programmatic Recommendations

SRTS programmatic recommendations are designed to work in conjunction with each other and with the infrastructure recommendations and to instill safe walking, bicycling and driving practices. The recommendations are organized according to the four “E’s” of Safe Routes to School: Education, Encouragement, Enforcement, and Evaluation.¹

Education

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. 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](http://www.pedbikeinfo.org/pedsaferjourney/el_en.html)

Incorporate information on walking and bicycling to school in communication with parents. Inform parents that Saint Patrick Catholic School supports walking and bicycling to school and educate parents about the academic and health benefits of walking and biking.

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. 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](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](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](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.virgiiniadot.org/programs/srsm_srts_zone_in_not_out.asp](http://www.virgiiniadot.org/programs/srsm_srts_zone_in_not_out.asp).

¹ The fifth E is Engineering, included in this report under Infrastructure Recommendations.
Encouragement

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. Consider establishing a meet up location at a nearby park for students who cannot walk from home. Resources to help plan Walk to School Day are available on the Virginia SRTS Program website. 

http://www.virginiadot.org/programs/srsm_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. Based on the generalized student address data provided to the Walkabout Team, potential walking school bus routes may include:

- Bolling Avenue/Studeley Avenue to Bolling Avenue/Westmoreland Avenue
- Magnolia Avenue/Studeley Avenue to Bolling Avenue/Westmoreland Avenue

For additional information on walking school buses and bicycle trains, see the following Virginia SRTS Program.

https://www.dropbox.com/s/7kz0qoyxc6o3ggk/VDOT%2oSRTS%20-%20Walking%20School%20Bus%20and%20Bike%20Train%20Webinar.pdf?dl=0

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/srsm_marketing_toolkit.asp

Upgrade/expand bicycle parking. A bicycle rack is available on the Westmoreland Avenue side of Saint Patrick Elementary, but the rack provided is “wave” rack, which is not the ideal type, because the rack does not support the bicycle frame in two places. The preferred type of rack is an “inverted U” or “staple” rack. The school should consider replacing or supplementing the existing rack with inverted U racks. It would be particularly valuable to locate additional bicycle parking in a covered area near the front the school that can be easily monitored (e.g., the corridor around the corner from the current racks where bicycles were parked on the day of the walkabout). Guidance regarding bicycle rack selection and placement is provided in this tip sheet developed by the Safe Routes to School National Partnership.


Enforcement

Request that the Norfolk Police Department conduct periodic speed enforcement on Hampton Boulevard and/or install a speed camera. Drivers appeared to be exceeding the speed limit on Hampton Boulevard, which is 35 mph.

Implement the Zone In, Not Out school zone safety program on Bolling Avenue. This program is aimed at increasing driver awareness of pedestrian and bicycle safety issues in school zones. Resources are available on the Virginia SRTS website: http://www.virginiadot.org/programs/srsm_srts_zone_in_not_out.asp.
**Evaluation**

Continue 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 a week of the school’s choosing each September and October. This data can be used to assess progress toward increasing the number of students who walk and bike to school. Student Travel Tallies have been conducted in October 2015, 2016, and 2017 for Triangle Elementary School. For more information about Student Tally Week go to the Virginia SRTS Program website.

http://www.virginiadot.org/programs/srsm_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. Administering parent surveys at least once a 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.dropbox.com/s/nl274zoligewqwf/Parent%20Survey_LDLv2.pdf?dl=0

Continue the Traffic Safety Committee to monitor implementation of recommendations and conduct yearly walkabouts. It’s important to monitor implementation or the recommendations in this walkabout report and others that the Traffic Safety Committee may identify. What strategies have been implemented, and what strategies have not? In addition, travel patterns are likely to change as recommendations from this report are implemented and as the student population ages out and shifts. Has traffic near the school gone down? Are pedestrians coming from a different direction now that the new sidewalk has been built? Is the bike rack overflowing? The Traffic Safety Committee should document such changes and consider whether additional adjustments are needed going forward. It is also recommended that the Traffic Safety Committee continue to coordinate with representatives from Larchmont Elementary School to identify strategies that could improve walking and bicycling conditions for students at both schools.
Appendices

A. Walkabout Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Steve Hammond</td>
<td>Principal, Saint Patrick Catholic School</td>
</tr>
<tr>
<td>Bill Eisenbeiss</td>
<td>Member, Saint Patrick Catholic School Board</td>
</tr>
<tr>
<td>Beverly Elliot</td>
<td>Saint Patrick Security Officer</td>
</tr>
<tr>
<td>Elizabeth Finne</td>
<td>Parent and Member, Saint Patrick Traffic Safety Committee</td>
</tr>
<tr>
<td>Marcus Cooper</td>
<td>President, Saint Patrick Celtic Council (Student Government)</td>
</tr>
<tr>
<td>Thomas Finne</td>
<td>Third Grade Representative, Saint Patrick Celtic Council</td>
</tr>
<tr>
<td>Rebecca DeWees</td>
<td>Counselor, Larchmont Elementary School</td>
</tr>
<tr>
<td>Nate Kinnison</td>
<td>PTA, Larchmont Elementary School and President, Larchmont Civic League</td>
</tr>
<tr>
<td>Emily Mitchell</td>
<td>PTA, Larchmont Elementary School</td>
</tr>
<tr>
<td>Scott Silsdorf</td>
<td>PTA, Larchmont Elementary School and Director of Transportation, Old Dominion University</td>
</tr>
<tr>
<td>Alison Schmidt</td>
<td>Parent, Larchmont Elementary School</td>
</tr>
<tr>
<td>Courtney Doyle</td>
<td>Councilmember, City of Norfolk</td>
</tr>
<tr>
<td>Amy Inman</td>
<td>Assistant Director of Public Works, City of Norfolk</td>
</tr>
<tr>
<td>Anne Doyle</td>
<td>Management Analyst, Public Works, City of Norfolk</td>
</tr>
<tr>
<td>Keith Darrow</td>
<td>Project Engineer/Manager, Public Works, City of Norfolk</td>
</tr>
<tr>
<td>Officer White</td>
<td>Norfolk City Police</td>
</tr>
<tr>
<td>Robert Williams</td>
<td>SRTS Coordinator, Virginia Department of Transportation</td>
</tr>
<tr>
<td>Theresa Pusateri</td>
<td>SRTS Coordinator, Norfolk Public Schools</td>
</tr>
<tr>
<td>Dan Reed</td>
<td>Coastal Local Technical Assistance Coordinator (LTAC); Planner II, Toole Design</td>
</tr>
<tr>
<td>Jim Elliott</td>
<td>Piedmont Local Technical Assistance Coordinator (LTAC); Senior Planner, Toole Design</td>
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<tr>
<td>Siba El-Samra</td>
<td>Landscape Designer, Toole Design</td>
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B. Road Information Table

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<thead>
<tr>
<th>Street Name</th>
<th>Speed limit (mph)</th>
<th>Road Width</th>
<th>No. of travel lanes in each direction</th>
<th>AADT²</th>
<th>Road Classification³</th>
<th>Network Connectivity</th>
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<tbody>
<tr>
<td>Hampton Boulevard (49th Street to VA 165/Little Creek Road)</td>
<td>35</td>
<td>78'</td>
<td>3</td>
<td>34,000</td>
<td>Arterial</td>
<td>Primary north-south route along the peninsula and direct connection to the Port of Norfolk. The speed limit is 30mph south of Buckingham Avenue; 15mph during school arrival and departure.</td>
</tr>
<tr>
<td>Jamestown Crescent (52nd Street to Hampton Boulevard)</td>
<td>25</td>
<td>42'</td>
<td>1</td>
<td>7,200</td>
<td>Minor Collector</td>
<td>Residential north-south street through the Larchmont neighborhood north of Saint Patrick.</td>
</tr>
<tr>
<td>Colley Avenue (27th Street to 52nd Street)</td>
<td>25</td>
<td>36'</td>
<td>1</td>
<td>14,000</td>
<td>Minor Collector</td>
<td>Commercial north-south street and one of two routes from the peninsula to the rest of Norfolk.</td>
</tr>
<tr>
<td>Bolling Avenue (Jamestown Crescent to Hampton Boulevard)</td>
<td>25</td>
<td>32'</td>
<td>1</td>
<td>2,000</td>
<td>Local</td>
<td>Local street that both Saint Patrick and Larchmont are located on. The speed limit is 15mph during school arrival and departure.</td>
</tr>
</tbody>
</table>

³ Road classification from VDOT, http://www.virginiadot.org/projects/fxn_class/maps.asp
C. Glossary of Infrastructure (Engineering) Terms

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

**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.

**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 Extensions**

Curb extensions extend the curb line into the roadway. They can improve the ability of pedestrians and motorists to see each other, reduce crossing distances (and thus exposure to traffic), provide additional pedestrian queuing space, and slow motor vehicle turning speeds.

**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-boaRoadgov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapter-r3-technical-requirements](http://www.access-boaRoadgov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines/chapter-r3-technical-requirements))

**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 common measures include speed humps, curb extensions, chicanes, and neighborhood roundabouts.
D. Key Policies Supporting Recommendations

VDOT Crosswalk Policy VDOT IIM-TE-384.04
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, 389 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.

E. Walkabout Photographs
The following photos were taken by Walkabout participants to document the Walkabout as well as supplement the report recommendations.

Figure 15: The dismissal queue outside Saint Patrick's lower school

Figure 16: The dismissal queue outside Saint Patrick's middle school backs up onto Bolling Avenue

Figure 17: The intersection of Westmoreland Avenue and Monroe Place

Figure 18: The "Five Points" intersection near Saint Patrick
Figure 19: Unclear signage and geometry on Westmoreland Avenue (left) and a private drive (right)

Figure 20: Bicyclists cross Hampton Boulevard at Bolling Avenue

Figure 21: A Larchmont Elementary school bus on Bolling Avenue

Figure 22: A crossing guard at Hampton Boulevard and Bolling Avenue
Figure 23: Vehicles picking up students outside Larchmont Elementary

Figure 24: Vehicles in the Larchmont Elementary pick-up queue

Figure 25: The intersection of Westmoreland Avenue and Monroe Place lacks crosswalks.

Figure 26: A secure bike parking area on Saint Patrick's campus
Figure 27: A family walks along Westmoreland Avenue, where there is no sidewalk.

Figure 28: Saint Patrick installed this gate to allow students to walk across the ballfields instead of in the street.

Figure 29: There is no marked crosswalk across Bolling Avenue at Westmoreland Avenue.

Figure 30: The angle of the intersection of Bolling Avenue and Monroe Place creates poor sightlines.