Safe Routes to School

Tampa School Transportation Safety Study

Prepared for:

Hillsborough TPO
Transportation
Planning Organization

City of Tampa
Florida

Final Report
December 2022
Approved by TPO Board on December 14, 2022

Persons needing assistance reading or interpreting items in this document, free of charge, are encouraged to contact Joshua Barber, (813) 272-5940, or barberj@plancom.org. Plan Hillsborough (the Planning Commission, the Hillsborough TPO and the Hillsborough River Board) cannot ensure accessibility for items produced by other agencies or organizations.

Se recomienda a las personas que necesiten ayuda para leer o interpretar este documento, sin costo alguno, que se pongan en contacto con Joshua Barber, (813) 272-5940, o barberj@plancom.org. Plan Hillsborough (la Comisión de Planificación, el TPO de Hillsborough y la Junta del Río Hillsborough) no puede asegurar la accesibilidad de los documentos publicados por otras agencias u organizaciones. Si sólo habla español, por favor llame a la línea de ayuda en español al (813) 272-5940 marque el número 1.

Table of Contents

Appendices

List of Figures

List of Tables

Executive Summary

Project Overview

This project is a collaboration of the Hillsborough Transportation Planning Organization (TPO) and the City of Tampa to update the 2018 *School Safety Study* (2018 Study). This study builds upon the 2018 Study and includes a select set of schools for multimodal safety and mobility reviews. Physical improvements are identified for eight schools, and a toolbox of educational and encouragement campaign materials for district wide use with near-term application to three schools is included. The study included the following key tasks:

- Establish a stakeholder group, including individuals from the City of Tampa, Hillsborough TPO, School District, Sidewalk Stompers, (a non-profit organization focused on implementing walking to school programs in Hillsborough County), Hillsborough County Sheriff's Department (Crossing Guard Program staff), Florida Department of Transportation (FDOT), the Center for Urban Transportation Research (CUTR), and local health groups
- Survey of school staff and student families on their school transportation challenges and barriers
- Prioritize and select schools for inclusion in the focused assessment (while all schools in the district were included in the prioritization, only schools in the City of Tampa were selected for focused assessments)
- Conduct observations at school sites selected for inclusion in the focused assessments and meet with staff at selected schools to discuss potential improvements
- Identify transportation system improvements around and connecting to selected school sites, and develop planning level cost estimates
- Develop education and outreach materials

Key Study Findings

While each school has its unique transportation challenges, several key themes emerged from the field observations, family and school administrator surveys (details provided in Chapter 2), and conversations with principals:

- There is insufficient walking and bicycling infrastructure around many schools that create a barrier for students to walk and bike to/from school, including a lack of marked and protected crossing locations
- People drive too fast around schools and on roadways connecting to schools, increasing the hesitancy of guardians to allow their student to walk or bike to school or to a school bus stop
- Many people live too far from the school to walk or bike, and the bus ride is too long
- Other non-transportation related issues such as crime serve as a deterrent to some in allowing their student to walk, bike or take the bus to school
- School administrators are unaware of resources available to them related to school transportation

A host of educational and encouragement strategies were identified, based on programs already occurring in the district, Safe Routes to School best practices, and feedback from the Stakeholder group and Principals about what strategies they would like to see implemented in the district and resources needed for implementation. Those strategies are described in detail in Chapter 3. Feedback from school administrators, the project team and the stakeholder group led to the development of district specific information, including a *"Who do I Call?"* flyer and a yard sign program. The audience for the *"Who do I Call?"* flyer is school administrators, with a flyer shown on **Figure ES-1**. Information such as reporting damaged infrastructure, requesting a bike rack, or requesting a school assembly is provided.

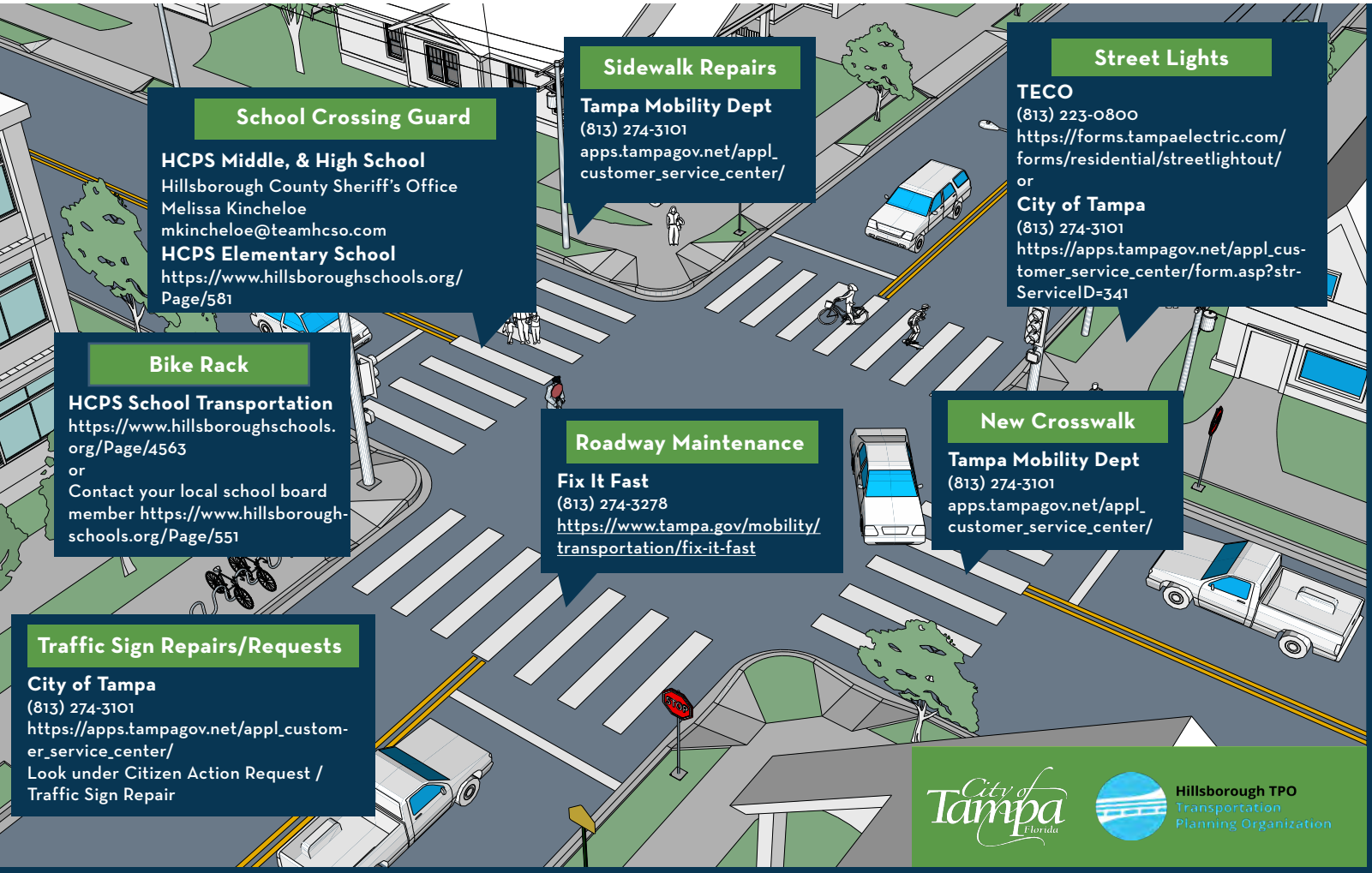
A yard sign program was also developed. The target audience for these signs would be the general traveling public as well as students and their families. Messages targeted to the general public are aimed to slow vehicle travel and make people aware that students may be walking in the area. Yard signs can also be used as a wayfinding element as part of a walk or bike to school day to highlight the most appropriate route to school. Example yard signs are shown on **Figure ES-2.**

Specific engineering countermeasures were identified for the focus schools included in this study, as presented on **Figures ES-3 through 8** and detailed in the chapters noted below.

- Shaw Elementary (details provided in Chapter 4)
- Potter Elementary (details provided in Chapter 5)
- West Tampa Elementary (details provided in Chapter 6)
- Orange Grove Middle Magnet (details provided in Chapter 7)
- Jefferson High School (details provided in Chapter 8)
- Just Elementary, Stewart Middle and Blake High School (combined as they are neighboring schools) (details provided in Chapter 9)

WHO DO I CALL?

FOR SCHOOL AREA SAFETY SERVICES IN THE CITY OF TAMPA



School Crossing Guard

HCPS Middle, & High School
Hillsborough County Sheriff's Office
Melissa Kincheloe
mkincheloe@teamhcso.com
HCPS Elementary School
https://www.hillsboroughschools.org/Page/581

Sidewalk Repairs

Tampa Mobility Dept
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

Street Lights

TECO
(813) 223-0800
https://forms.tampaelectric.com/forms/residential/streetlightout/
or
City of Tampa
(813) 274-3101
https://apps.tampagov.net/appl_customer_service_center/form.asp?strServiceID=341

Bike Rack

HCPS School Transportation
https://www.hillsboroughschools.org/Page/4563
or
Contact your local school board member https://www.hillsborough-schools.org/Page/551

Roadway Maintenance

Fix It Fast
(813) 274-3278
https://www.tampa.gov/mobility/transportation/fix-it-fast

New Crosswalk

Tampa Mobility Dept
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

Traffic Sign Repairs/Requests

City of Tampa
(813) 274-3101
https://apps.tampagov.net/appl_customer_service_center/
Look under Citizen Action Request / Traffic Sign Repair

City of Tampa Florida

Hillsborough TPO
Transportation Planning Organization

REPORT SAFETY CONCERNS

TAMPA MOBILITY DEPT.
General Traffic
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

TAMPA MOBILITY DEPT.
School Zone/Area Safety
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

FDOT SAFE ROUTES TO SCHOOL PROGRAM, DISTRICT 7
School Zone Safety
https://www.fdot.gov/Safety/programs/safe-routes-quicklinks.shtm

HILLSBOROUGH COUNTY PUBLIC SCHOOLS
Bus Stop Too Far or Unsafe
(813) 982-5500
https://www.hillsboroughschools.org/transportation

ENCOURAGE WALKING

SIDEWALK STOMPERS
Walk to School Programs
Target Audience: All Ages
https://sidewalkstompers.org/

EDUCATIONAL PRESENTATIONS

Bicycle Clinic

TARGET AUDIENCE: PE Class
St. Joseph's Children's Wellness & Safety Center
(813) 615-0938
kristi.nalls@baycare.org

Biking Walking Curriculum

TARGET AUDIENCE: 1st & 4th Grade
MORE HEALTH, Inc.
(813) 288-0378
https://www.morehealthinc.org/education/#Lessons-Grades-K-5
clemaster@morehealthinc.org

Transportation Safety Presentation/Campaign

TARGET AUDIENCE: All Ages
Bike/Walk Tampa Bay
https://walkbikedrive.org/
JMBond@usf.edu

Driver Safety Education

TARGET AUDIENCE: High School
FDOT Community Traffic Safety Team
http://tampabaytrafficsafety.com/

Vision Zero Safety Speaker

TARGET AUDIENCE: All Ages
https://www.tampa.gov/visionzero
https://planhillsborough.org/vision-zero/

Figure ES-1

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

City of Tampa Florida

Hillsborough TPO Transportation Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

Yard Sign Option 3

Figure ES-2

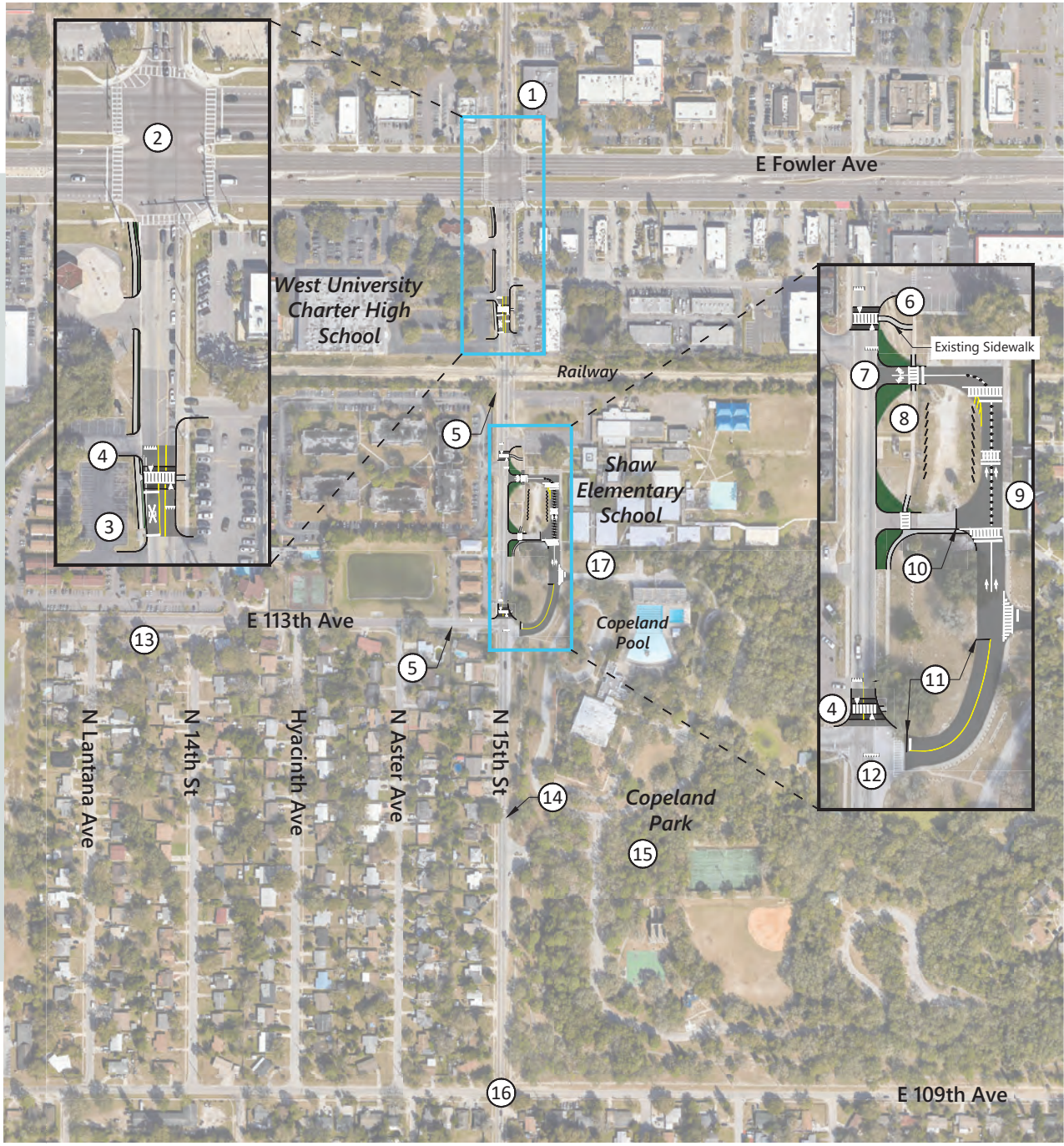
Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Coordinate with the County to remove pedestrian crossing signs where a crosswalk is not present; consider installing Advance Pedestrian Crossing sign (W11-2).
2. Implement the existing Improvement Plan for Fowler Avenue.
3. Connect bus stop to Fowler Avenue with a sidewalk.
4. Install raised crosswalk with advance yield lines and signage; consider installing RRFB.
5. Bring existing School Speed Zones into compliance with State Statue and install school zone flashers where appropriate.
6. Update crosswalk markings and convert to raised crosswalk with advance yield lines and signage; consider installing RRFB.
7. Modify driveways to reduce speed of vehicles turning to N 15th Street. To prevent people from parking across sidewalk and landscaped areas, consider installing curb or some other physical barrier.
8. Formalize lot for parking to maximize spaces and delineate walking routes from parking area to school entrance. Initially, parking spots can be delineated using railroad ties, wheel stops, pavers, or other material. Grass pavers could be considered for a longer-term installation.
9. Consider implementing a dual lane pick-up system where pick-up can be accomplished from both lanes. Additional operational details provided in text of report. Sign left lane for traffic going south on 15th Street and the right lane for traffic traveling north on 15th Street.
10. Install a gate or barricade to prevent traffic from using this entrance. Barricades can be formed by permanent or rolling planters, plastic or metal barricades, or other material.
11. Consider converting this roadway segment to one way only either during pick-up only or permanently to maximize on-site queue storage. Maintenance access to Copeland Pool may be affected and should be considered in final plans. Gates could be added and would have to be closed during pick-up/drop-off hours and reopened afterward.
12. Evaluate the intersection of N 15th Street and E 113th Avenue for All-Way Stop-Control Installation.
13. Construct a sidewalk on the north side of E 113th Avenue. This would likely require narrowing the roadway to 20 feet.
14. Evaluate potential to provide inset-parking on the east side of N 15th Street.
15. Implement improvements identified in the Safe Access to Parks Study, which includes installation of additional traffic calming along N 15th Street and E 109th Avenue, construction of sidewalks at main park entrance connecting to the internal walking system, street lighting upgrades, and other transportation system improvements.
16. Evaluate potential to install a mini-roundabout.
17. Provide more accessible and visible bike parking.



Shaw Elementary School
N 15th Street
Tampa, Florida

Figure ES-3

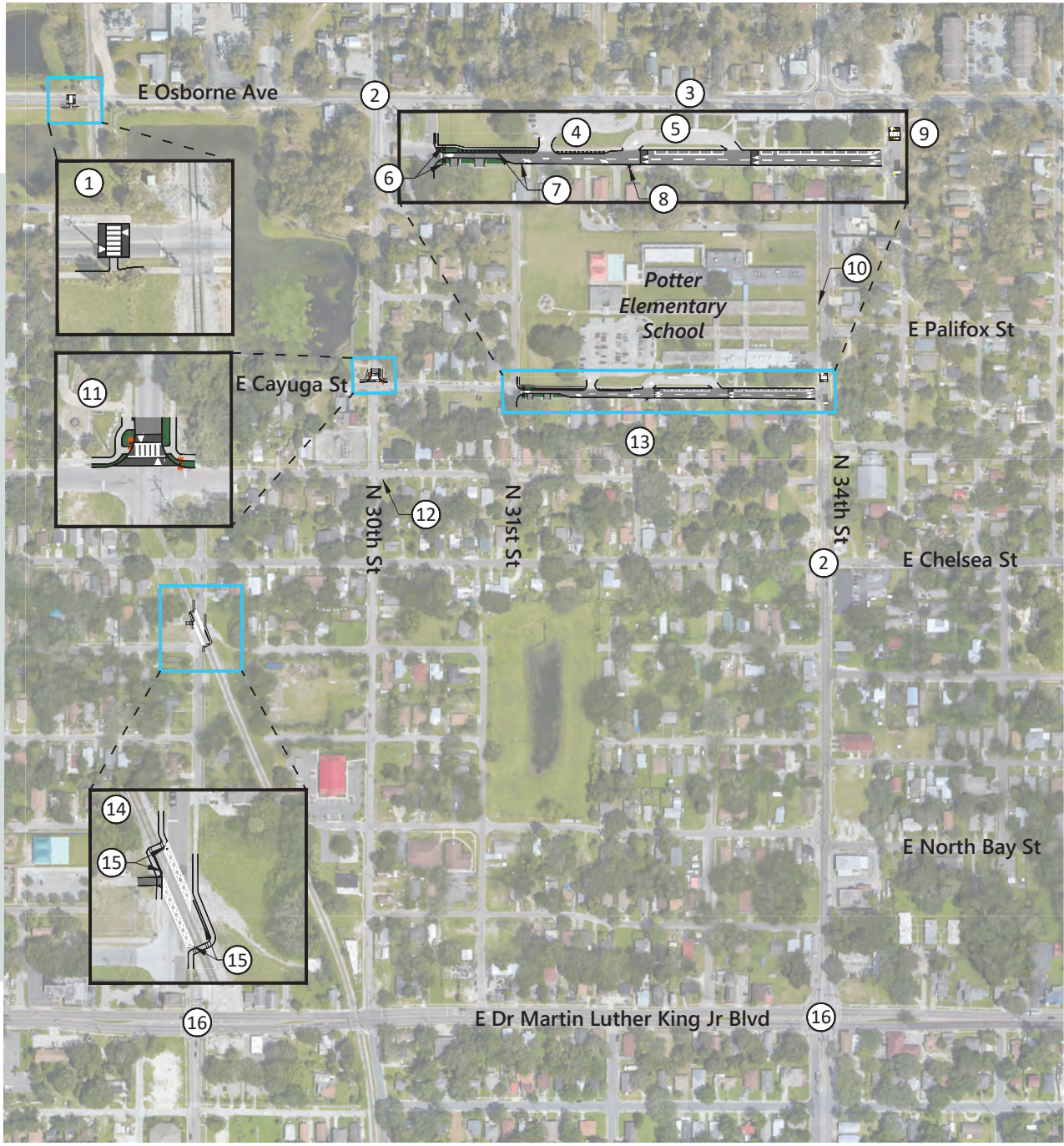
Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Install a raised crosswalk and work with CSX to upgrade crossing safety equipment.
2. Refresh crosswalk markings.
3. Install double yellow lines on E Osborne Avenue.
4. Add a vertical barrier between the roadway and sidewalk to prevent parents/guardians from blocking the sidewalk.
5. Convert Cayuga Street from N 31st Street to N 34th Street to one-way westbound and install two speed humps. Consider painting the school mascot or a mural on this segment to emphasize that it is a school zone.
6. Convert to an All-Way Stop. Install Stop Sign (R1-1) westbound, Do Not Enter sign (R5-1) eastbound, One Way sign (R6-1), No Right Turn sign (R3-1) northbound, and No Left Turn sign (R3-2) southbound.
7. Install signs prohibiting parking on both sides of E Cayuga Street between N 31st Street and the parking lot driveway.
8. Install One Way sign (R6-1) and No Right Turn (R3-1) sign.
9. Convert crossing to a raised crosswalk. Consider giving the crossing guard a key to manually override the signal.
10. Bring existing School Speed Zones into compliance with State Statute.
11. Install a raised crosswalk and RRFBs.
12. Refresh stop bar markings and consider installing marked crosswalks.
13. Remove the school zone sign on N 32nd Street.
14. Install sidewalks that intersect railroad tracks at a 90 degree angle. Sidewalks should have detectable warning surfaces before on either side of the tracks. Install dynamic envelopes in the roadway on either side or the tracks.
15. Install a railing to encourage users to stay on the sidewalk.
16. Add Leading Pedestrian Intervals and bicycle detection at Dr Martin Luther King Jr Boulevard.



Potter Elementary School
Cayuga Street
Tampa, Florida

Figure ES-4

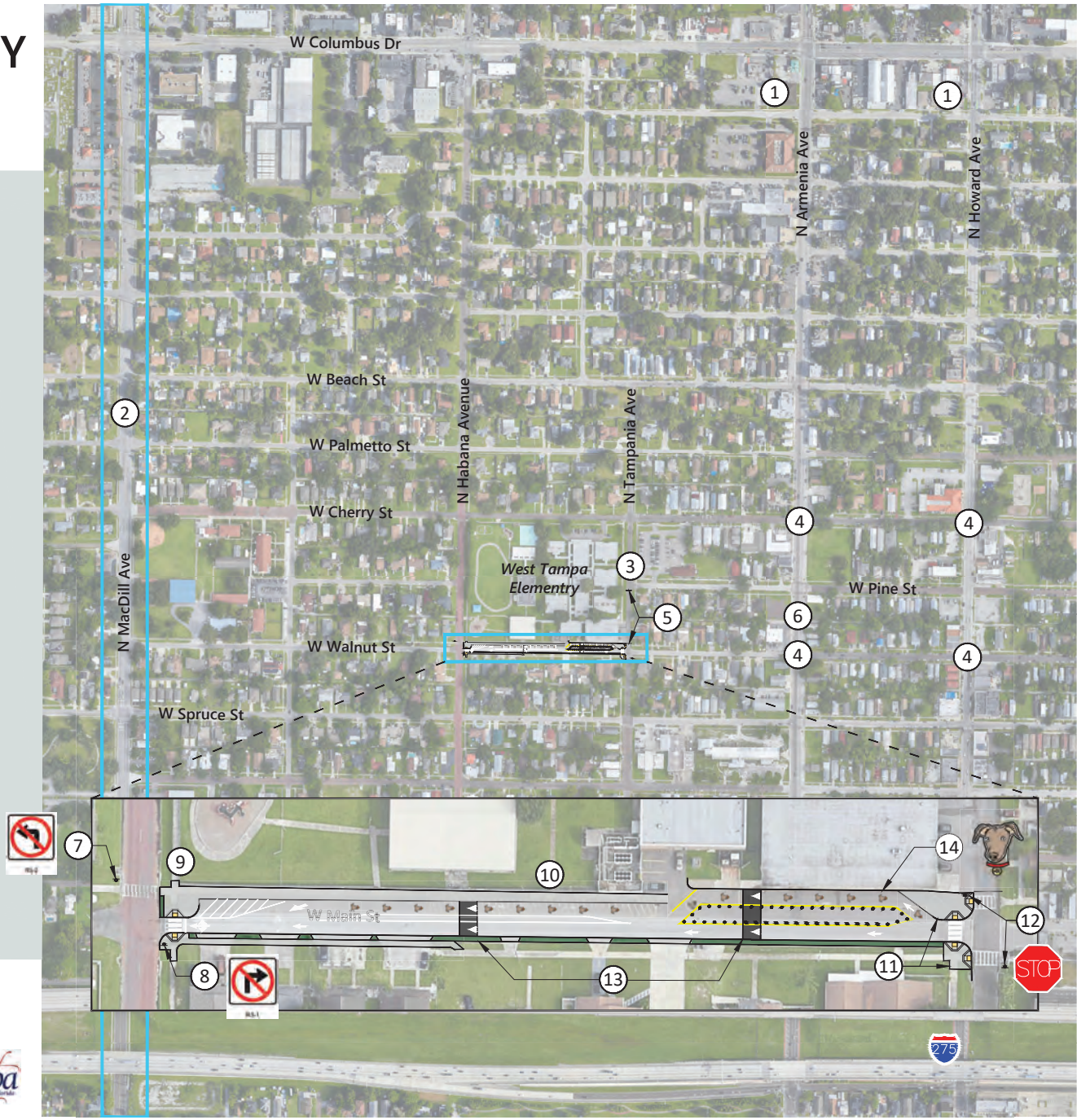
Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Implement improvements on Armenia Avenue and Howard Avenue as identified in the West Tampa Multi Modal Plan, which generally include adding bicycle facilities, narrowing travel lanes, eliminating excess turning capacity to shorten pedestrian crossing distances, widening the sidewalk, and constructing curb extensions. While all on-street parking is generally expected to be maintained, parking restrictions may need to be implemented to provide adequate sight-distance.
2. Evaluate Macdill Avenue for lane repurposing and evaluate providing additional marked and controlled crossing locations connecting from neighborhoods to the schools.
3. Add marked crosswalk connecting teacher parking lot to the school.
4. Upgrade curb ramps for ADA compliance and install marked crosswalks and other appropriate crossing treatments.
5. Formalize process to close one block portion of Tampania Avenue during morning drop-up and afternoon pick-up. See report for additional details.
6. Evaluate location of pedestrian crossing in conjunction with other planned improvements on Armenia Avenue. If crossing is to remain, provide ADA compliant curb ramps and advanced stop bar.
7. Install No Left Turn sign (R3-2).
8. Install No Right Turn Sign (R3-1).
9. Extend curb to narrow to one lane to further reinforce the one-way designation.
10. Update striping to reduce vehicle conflicts. Move the southern edge of pavement 3.5 feet north to align with the curb extensions on the east and west side of the corridor. Extend sidewalk on the south side to connect to N Habana Street.
11. Install curb extensions. In the near-term, the curb extension can be created using striping and posts. In the long-tern, consider raised curbs.
12. Convert W Walnut Street and N Tampania Avenue to All-Way Stop.
13. Install speed humps or consider using portable speed bumps.
14. Incorporate school logo into car line.



West Tampa Elementary School
West Cherry Street
Tampa, Florida

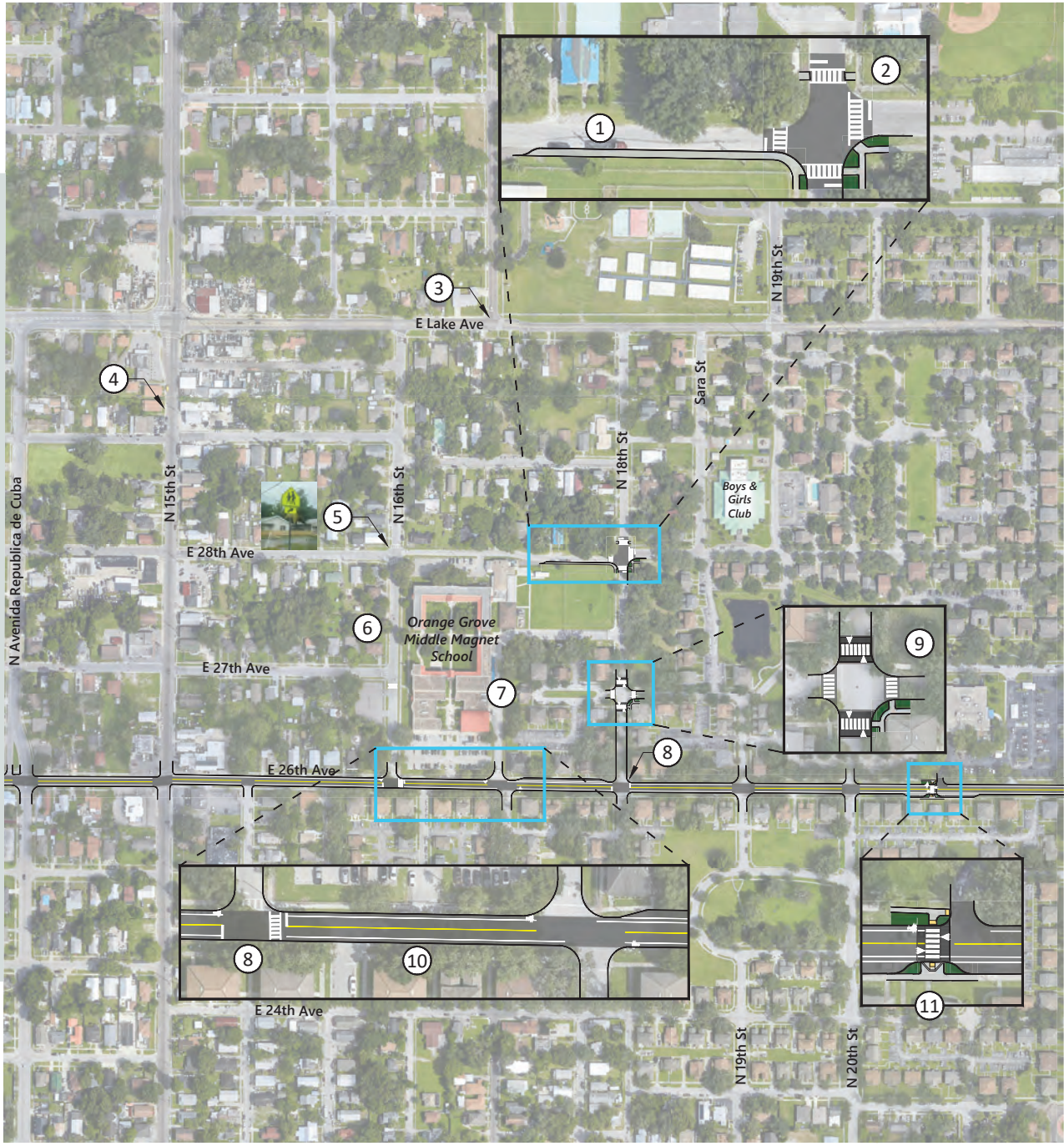
Figure ES-5

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

N

1. Add sidewalk for walkers exiting the school from the north
2. Install marked crosswalks and an All-Way stop.
3. Install All-Way Stop. Additionally, install a raised crosswalk on the east leg of the intersection or other traffic calming device.
4. Implement existing Complete Streets Improvements, which include walking and bicycling infrastructure, lane narrowing, and more frequent marked crosswalks.
5. Remove Pedestrian Crossing sign and install All-Way Stop.
6. Allow parking on one side of the roadway.
7. Update signage directing parents/guardians to the correct pick-up/drop-off location. The entrance to the car line is signed as Bus Only and there are signs on 26th Avenue directing drivers to 16th Street.
8. Install All-Way Stop.
9. Install marked crosswalks on all legs and raised crosswalks on the north and south legs.
10. Narrow travel lanes to 10 feet and add four-foot bike lanes.
11. Add a curb extension to reduce pedestrian crossing distance and install a raised crosswalk.
12. Bring existing School Speed Zone into compliance with State Statute and install flashers.



Orange Grove Magnet Middle School
16th Street
Tampa, Florida

Figure ES-6

Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Add a marked crosswalk and landscape median. Consider providing a raised crosswalk.
2. Open sidewalk gates during student arrival and dismissal.
3. Add a marked crosswalk and a sidewalk connection to high school. Consider providing a raised crosswalk.
4. Add a sidewalk on the west side of Trask Street.
5. Fix pedestrian push buttons, update the intersection to meet current ADA standards, and provide a bus shelter on the northeast corner. During field work, the pedestrian push button on the northeast corner of the intersection was not functioning.
6. Conduct signal warrant analysis. If warranted, signalize intersection and add crosswalks.
7. Implement the Lois Avenue Complete Streets Plan. Some components of the plan include narrowing existing travel lanes to accommodate four foot bike lanes, widening the sidewalk on the east side of the roadway north of I-275, and adding crosswalks on the side streets.
8. Install a sidewalk connection to the high school.
9. Tighten curb radius. Evaluate signalizing intersection. If intersection is signalized, add crosswalks.
10. Consider relocating the existing bus stops on both the north and south sides of Cypress Street to encourage users to cross at the marked crossing.
11. Bring existing School Speed Zones into compliance with State Statute and install flashers.
12. Add street trees and public amenities in accordance with the Westshore Alliance Master Plan.
13. Collaborate with the Westshore Alliance to implement painted intersections.

Jefferson High School
West Cypress Street
Tampa, Florida

Figure ES-7

Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

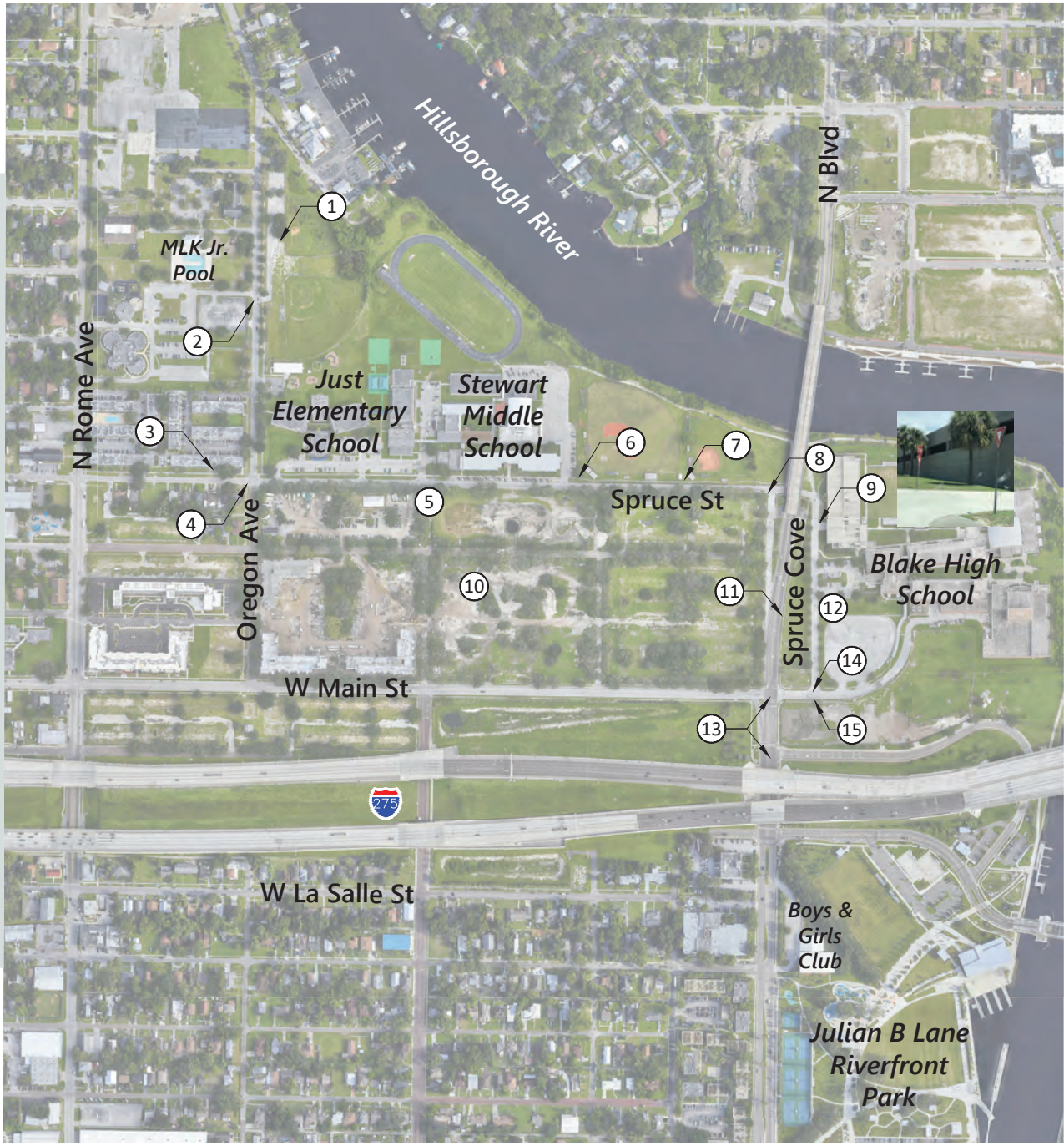
Tampa School Transportation Safety Study

N

1. Contemplate formalizing this parking lot as a pick-up area. A connection to the school along the property may be necessary when the parcel north of the schools is developed. Consider the extension of the West River Trail when planning the construction of the connection.
2. Install curb cuts and a sidewalk connection at marked crossing.
3. Consider allowing parking here or physically prevent people from parking on the north side of W Spruce Street west of N Oregon Avenue.
4. Implement painted intersection plan.
5. Implement a speed limit 15 or 20 mph on Spruce Street and Spruce Cove and enforce limit; consider dedicating Spruce Street back to the City for maintenance and enforcement.
6. Install a raised crosswalk and curb ramps connecting the end of the sidewalk to the south side of street, or relocate fence along south side of ball fields so that sidewalk can be used.
7. Bring existing School Speed Zone into compliance with State Statute and install flashers.
8. Improve temporary pedestrian walkway.
9. Remove Yield sign.
10. Reevaluate area circulation when development is completed to provide direct pedestrian connections from the neighborhood to the campuses
11. Install signage to prohibit stopping or standing.
12. Add a barrier between sidewalk and travel lane.
13. Optimize and coordinate signal timings.
14. Consider adding a marked crossway on the east side of the intersection.
15. Move fence to other side of sidewalk, or construct sidewalk on school property.

Implement educational and encouragement strategies detailed in the report including:

- Provide bicycle education, including helmet giveaway.
- Implement carpool program, targeting the Middle School and High School.
- Work with Blake High School to develop transportation safety videos targeted and K-12 students.
- Develop a walking routes program.



Just Elementary School, West Spruce Street
Stewart Middle School, West Spruce Street
Blake High School, North Boulevard
Tampa, Florida

Figure ES-8

Hillsborough TPO Transportation Planning Organization

City of Tampa

1. Introduction

Project Background

This project is a collaboration between the Hillsborough Transportation Planning Organization (TPO) and the City of Tampa to update the 2018 *School Safety Study* (2018 Study). The 2018 Study focused on multimodal safety and mobility reviews to identify engineering countermeasures at twelve schools within the Hillsborough County Public School (HCPS) district. As there are over 270 schools in Hillsborough County, this study builds upon the 2018 Study and includes a select set of schools for multimodal safety and mobility reviews. Physical improvements are identified for eight schools, and a toolbox of educational and encouragement campaign materials for district wide use with near-term application to three schools is included.

Study Goals and Approach

The overall goals of the project include:

- Identification of physical transportation system improvements around and connecting to a set of schools
- Identification of school specific education and encouragement strategies to serve as a resource for all schools

The project included the following tasks to achieve these goals:

- Establish a stakeholder group, including individuals from the City of Tampa, Hillsborough TPO, HCPS School District, Sidewalk Stompers, Hillsborough County Sheriff's Department (Crossing Guard Program staff), Florida Department of Transportation (FDOT), the Center for Urban Transportation Research (CUTR), and local health groups
- Survey of school staff and student families on their school transportation challenges and barriers
- Prioritize and select schools for inclusion in the focused assessment
- Conduct observations at select school sites and meet with staff to discuss potential improvements
- Identify transportation system improvements around and connecting to selected school sites, and develop planning level cost estimates
- Develop education and outreach materials

HCPS is the 7th largest school district in the country, with over 224,000 students across 274 school sites, including 137 K-5 schools, 45 middle schools, 28 high schools, nine K-8 schools, four career centers, four technical colleges and 54 charter schools. The career centers, technical colleges and charter schools were not ultimately included in the ranking process. Each school is in a unique setting, with different transportation advantages and challenges. As there are limited resources to conduct Safe Routes to School assessments, the prioritization process is intended to identify schools that would benefit the most from a focused assessment. Schools that were included in the 2018 Study or other recent Safe Routes to School studies were included in the updated prioritization process but are not included in the focused assessments, as previously identified improvements are still being implemented.

School Selection

The identification of school facilities to include in the focused assessment builds upon the process developed for the 2018 Study, using the most recent available data. Data used in the prioritization process includes:

- School location and enrollment
- Size/dimensions of enrollment boundary area [1]
- Underserved community designations
- Percent of students qualifying for free or reduced lunch
- High Injury Network (Hillsborough TPO and City of Tampa)
- Bicycle and Pedestrian fatality and serious injury crash locations (2017-2021)
- All traffic crashes that involve school aged people during travel to/from school times and other times
- Roadway network characteristics

[1] The Hillsborough County School District is currently undertaking a process to refine school enrollment boundary areas. As there is uncertainty about how enrollment areas might change in the future, the strategies identified in this study focused on the immediate walking and biking areas around each school such that any recommendation, when implemented, would have lasting benefit to the existing and future school population.

- Proximity to other schools, libraries, and recreation centers

Although the school ranking was conducted for all schools in the district, the more detailed school assessments focus on schools in the City of Tampa as the City requested this study. The full results of the school ranking are provided in **Appendix A.**

Based on the initial rankings and feedback from the project stakeholder group, the following schools were selected for inclusion in the focused assessment:

- Shaw Elementary
- West Tampa Elementary
- Potter Elementary
- Orange Middle Magnet
- Jefferson High School
- Just Elementary, Stewart Middle and Blake High School (combined as they are neighboring schools)

Report Organization

This report is organized to provide results from the school surveys and outline educational and encouragement strategies that could be applied to all schools in the district. Separate chapters for each of the schools noted above document the existing conditions assessment and transportation system improvements that were identified in consultation with the project team, school staff and the stakeholder group.

2. School Survey Results

In 2017, the Hillsborough TPO and its Student Transportation Work Group (STWG) sought to collect information from families in Hillsborough County to inform school planning efforts. Given the length of time since the last survey was administered, changes in school district boundaries, as well as potential for changed school travel behavior after the COVID-19 pandemic, an updated school survey was administered in April 2022. In addition to a survey of school families, a separate survey targeted to school principals and administrators was also developed and disseminated.

The following provides information related to the survey questions, a high-level review of the responses from a district level, and more specific responses received from focus-school families and administrators.

Family Survey Questions

The family survey was sent to families and guardians of all 224,000 students in the district. The survey questions generally followed the 2017 survey to allow for comparison at the district level, with a post COVID-19 question added. Questions aimed to document the demographics of the respondent (school, grade level, age of student, residence zip code and how many students in a specific household), their school travel patterns and concerns related to their travel to and from school. The full text of the survey questions can be found in **Appendix B**.

School Principal Survey Questions

The School Principal survey was developed as a part of this project in close coordination with school district staff and feedback from the Stakeholder Group. Questions were designed to identify the travel mode share to their school (i.e., what percent of students walk, bike, take the bus), their transportation challenges and barriers, and staffing resources available to facilitate morning drop-off and afternoon pick-up. Information related to specific strategies employed at their school to manage drop-off and pick-up was requested. The full survey can be found in **Appendix C**.

Family Survey Results

The family survey was sent to the parents/guardians of all 224,000 students in the District in April of 2022 via email. Several reminder emails were sent, and there was an overall response of over 10,000, representing approximately 18,000 students in the district. The percent of respondents by school type is shown in Image 1. Based on the enrollment by school type, responses from Elementary School families are slightly overrepresented and responses from High School families are underrepresented.

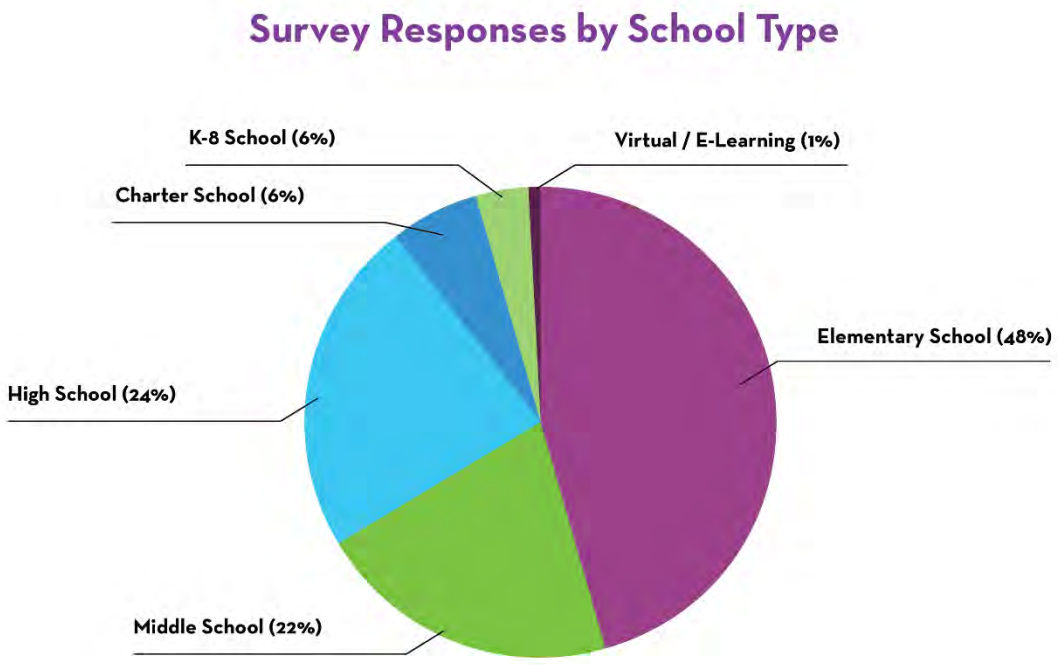


Image 1: Survey Responses by School Type

About 88 percent of respondents indicated that their student is driven to/from school in some sort of vehicle, including personal vehicle, school bus, transit bus, contracted private transportation, or daycare transportation. There is some variation depending on the time of day, with more students walking home, taking the bus home, and taking daycare transportation in the afternoon, as summarized in **Table 1.**

Table 1: Travel Mode to and From School

Travel Mode	Trips to School	Trips From School
Walks alone	2.6%	3.9%
Walks with a parent	3.9%	3.2%
Walking School Bus	0.8%	0.5%
Bicycles alone	2.4%	2.5%
Bike Train	0.6%	0.6%
Scooter/Skateboard	0.2%	0.2%
School bus	31.1%	34.0%
Public transit	0.3%	0.3%
Personal vehicle	53.1%	44.5%
Carpool	3.4%	3.1%
Daycare Transportation	0.5%	5.5%
Contracted Private Provider	0.3%	0.5%
Other form of transportation	0.8%	1.1%
	100%	100%

Source: Fehr & Peers.

While the area surrounding each school has its own unique characteristics, families were asked to provide information related to transportation. We asked specifically about barriers to having students walk or bike to/from school. More than half cited the distance of their home to the school. Speed of traffic along the route and the safety of specific intersections or crossings was also a large barrier cited by more than half of families. Lack of sidewalks/paths, and weather are also top issues. For about a third of families, the lack of other students or adults to walk or bike with their student was a barrier, so providing walking partner matching or a walking school bus, along with promotion of those strategies, could entice some families to let their student walk or bike to school. Violence/crime in the area was cited by about 20 percent of respondents as a barrier. Convenience and before/after school activities was also noted as a reason why people drive their student to/from school.

The top five issues that affect the decision to let a student walk or bike to school are summarized on Image 2.

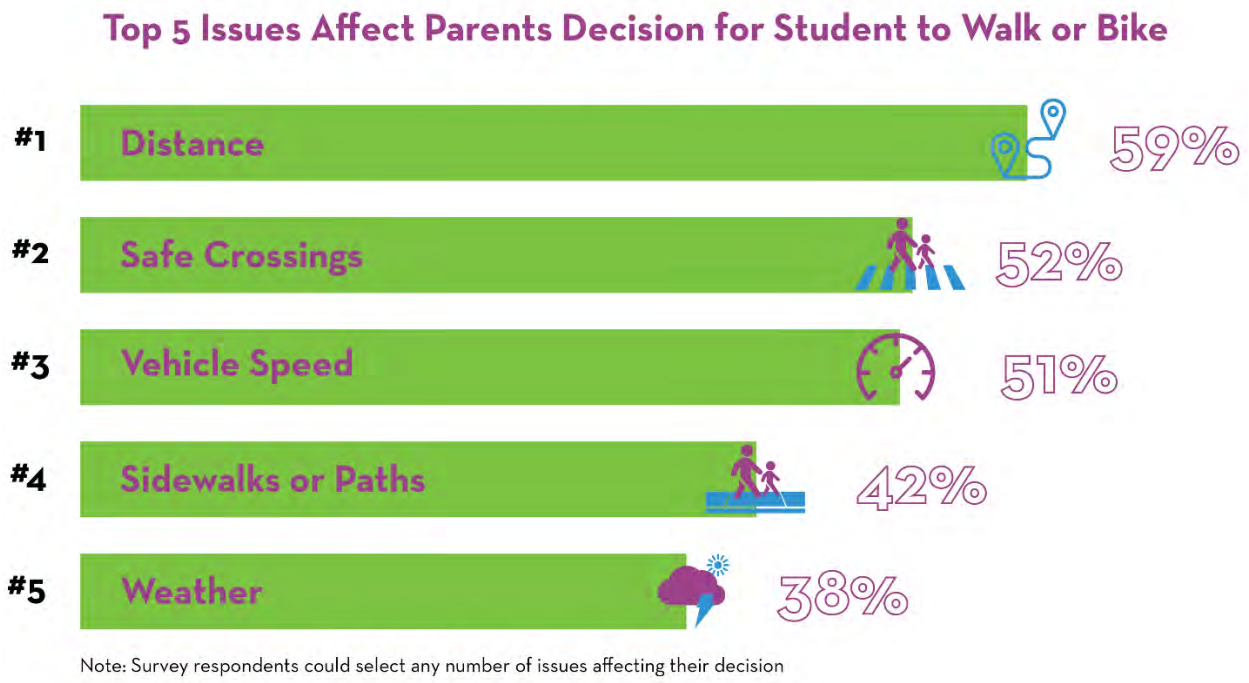


Image 2: Top Issues that Affect Decisions for Students to Walk or Bike.

Understanding household distance from school plays an important role in understanding a student's ability to engage in modes other than a personal vehicle. As shown on Image 3, over 5,000 survey respondents (56%) shared that they live more than two miles away from school. Twenty-four percent, or 2,108 students, live between 1 mile and 2 miles. The remaining 20 percent of students live less than 1 mile from school.

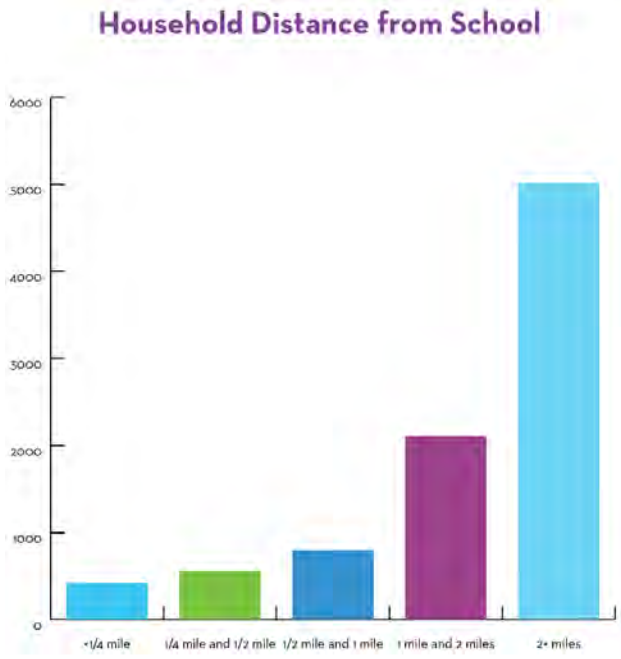


Image 3: Household Distance from School

Further refinement of the distance factor was performed to understand students' ability to walk to school. A half-mile distance is considered a reasonable length younger students will walk to school, with around a mile considered reasonable for older students. Image 4 highlights the percent of students who live within walking distance by school type. The highest opportunity for encouraging students to walk is likely at the elementary school level, as 19 percent of Elementary School students live within a half-mile distance from school. The number of students with the ability to walk to school decreases as the students age to Middle School and High School, despite increasing the distance to one mile. This is likely a result of fewer Middle and High Schools in the region with larger enrollment areas, while Elementary Schools' enrollment boundaries are typically smaller and more neighborhood serving.

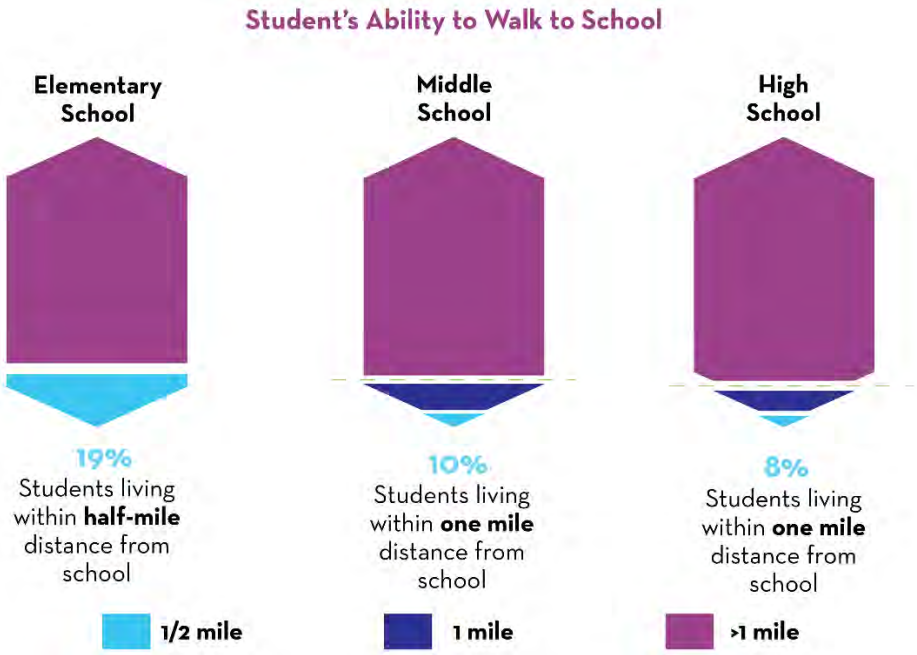


Image 4: Students by Grade and Distance from School

A new question was added to the survey to determine how COVID-19 might have changed family travel patterns. For most, it did not change the travel patterns of respondents. While some students stopped taking the school bus, others started doing so. About 8.5 percent reported that their student is transported in a vehicle more often. A slight increase in carpooling and walking was also reported.

- 57 percent noted no change in travel to/from school compared to pre-COVID.
- 4 percent reported that their student stopped taking the school bus to school
- 3 percent reported that their student started taking the school bus
- Less than one percent reported that their student is transported to school in a car less often
- 8.5 percent reported that their student is transported to school in a car more often
- 1.6 percent reported carpooling to school more often
- 1 percent started walking to school

Focus School Responses

Responses from the focus schools were reviewed in more detail. As there is a relatively small sample size from any one individual school, these responses are not considered statistically significant.

Shaw Elementary School

Eight families completed the survey, some with multiple children at the school, representing 1 walker, 4 bus riders, 2 car riders, and one student that is transported in a day care vehicle. Half would not feel comfortable allowing their child to walk in any grade. Half cited distance as a barrier to walking to school. Speed of traffic, the safety of intersections, and absence of crossing guards are all factors that affect their decision to let their student walk/bike to school. Some are also concerned about crime in the area.

Potter Elementary School

Four families completed the survey, some with multiple children at the school. These families represent the following modes of travel:

- Bus rider
- Personal vehicle
- Walking school bus participant

Half would not feel comfortable allowing their child to walk in any grade. Half cited distance as a barrier to walking to school. Speed of traffic, the safety of intersections, and absence of crossing guards are all factors that affect their decision to let their student walk/bike to school. Some are also concerned about crime in the area.

West Tampa Elementary

Eight families completed the survey, some with multiple children at the school. These families represent the following modes of travel:

- Personal vehicle
- Walks alone
- Walks with parent

75 percent would not feel comfortable allowing their child to walk in any grade. Half cited distance as a barrier to walking to school. Speed of traffic, the safety of intersections, and absence of crossing guards are all factors that affect their decision to let their student walk/bike to school. Some are also concerned about crime in the area. Respondents specifically mentioned challenges crossing Armenia Avenue and Howard Avenue, as well as parked cars on major streets impeding visibility when trying to cross.

Orange Grove Middle Magnet

Thirty-seven families completed the survey, some with multiple children at the school. Most arrive/depart in a school bus or personal vehicle. A few walk with others or walk alone. Two families carpool. About 75

percent would not feel comfortable allowing their child to walk in any grade. About 75 percent cited distance as a barrier to walking to school, as many come from long distances to attend this school.

Speed of traffic, the safety of intersections, and absence of crossing guards are all factors that affect their decision to let their student walk/bike to school. Some would allow their student to walk to school if they had a peer or another adult to walk with.

Jefferson High School

28 families completed the survey, some with multiple children at the school. These families represent:

- Bus rider (58%)
- Personal vehicle (25%)
- Public Transit (4%)
- Carpool (4%)
- Walks (4%)

More than 66 percent would not feel comfortable allowing their child to walk in any grade. Half cited distance as a barrier to walking to school. Speed of traffic, the safety of intersections, and lighting are all factors that affect their decision to let their student walk/bike to school. Some are also concerned about crime in the area.

Just Elementary

No responses were received from Just families. Several neighbors and families were interviewed during the field review and the speed of traffic and improper driver behavior were noted as issues in the area.

Stewart Magnet Middle

40 families completed the survey, some with multiple children at the school. These families represent:

- Bus rider (55%)
- Personal vehicle (33%)
- Public Transit (2.5%)
- Walks (7%)
- Bikes (2.5%)

73 percent would not feel comfortable allowing their child to walk in any grade and the speed of traffic, the safety of intersections, and lighting are all factors that affect their decision to let their student walk/bike to school. Additional barriers to walking, biking, or taking the bus were also documented:

- Lack of peers/group to walk with
- Lack of safety at bus stop is a deterrent
- Locked gates on Riverwalk barrier to biking
- Assault of other students on bus
- Lack of infrastructure for people walking and biking

- Groups of students in neighborhood behaving inappropriately is a barrier to others walking
- Location of bus stop adjacent to sex offender residence (this has not been independently verified)
- Lack of lighting at bus stop

Blake High School

49 families completed the survey, some with multiple children at the school. These families represent:

- Bus rider (40%)
- Personal vehicle (45%)
- Walks (15%)

36 percent would not feel comfortable allowing their child to walk in any grade. Speed of traffic, the safety of intersections, and lighting are all factors that affect their decision to let their student walk/bike to school. Additional barriers to walking, biking or taking the bus were also documented:

- Lack of peers/group to walk with
- Lack of safety at bus stop is a deterrent
- Assault of other students on bus
- Lack of infrastructure for people walking and biking
- Lack of lighting at bus stop

Principal Survey Results

Responses were received from 188 schools in the district, with some schools submitting 2 responses. Overall, the school type (elementary, middle, high, K-8, etc.) response rate is generally representative, meaning that there is not a specific school type overrepresented in the data.

Overall, 58 percent of survey respondents indicated that their school would benefit from a school transportation study, with 13 percent indicating that they would not benefit. 29 percent are unsure, which is a potential education opportunity to inform school administrators about what is typically included in a school transportation study and what it might yield in terms of physical improvements and circulation strategies. When asked about specific transportation concerns around their schools, some consistent themes across all schools represented in the responses emerged, as shown on Image 5.

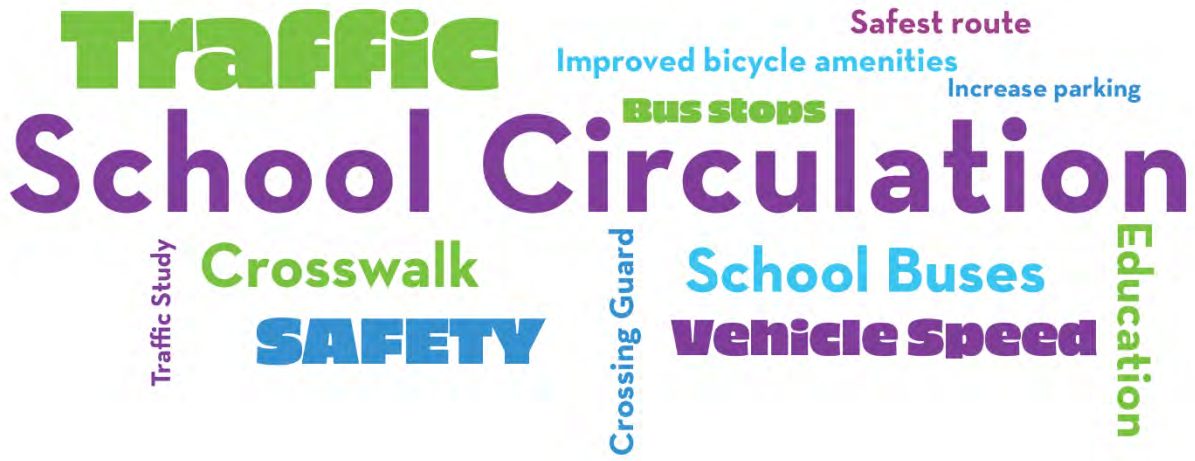


Image 5: School Circulation Challenges

Circulation Strategies

School administrators were asked to share their specific drop-off/pick-up operational strategies, with strategies employed at district schools summarized in **Table 2**. The most common strategy shared among the surveyed principals was multiple dismissal locations, meaning there are multiple exit/pick-up locations for students. Some schools indicated that dismissal locations are based on the student's transportation mode or the location of their household. Multiple schools provide students who walk a separate dismissal area away from vehicle traffic and school buses.

Table 2: Drop-off/Pick-Up Strategies

Strategy	Description
Multiple dismissal locations	Multiple exit locations with dismissal locations based on transportation mode.
Placards/Tags on Vehicles	Visible element on pick-up vehicle window corresponding to specific student(s).
Staggered dismissal by grade	Dismissing students by grade levels at different times to disperse the pick-up demand; special considerations can be made for families with students in different grades.

Table 2: Drop-off/Pick-Up Strategies

Strategy	Description
Staggered by mode	Dismissing students by transportation mode at different times; often includes dismissal of students who ride the bus or walk first.
Buses go first	Holding all vehicle, foot, and bike traffic until buses leave the school parking lot; often includes teacher participation to ensure all necessary students are present.
Assigned Cone Number/Specific Point for Pick-up	Includes assigning students to a specific pick-up location within the school parking lot, often including a numbered cone or other identification element, to disperse demand.
Technology	Several schools use a phone-based application (Voxer) to communicate with parents in the pick-up line such that the student can be more quickly matched with the correct vehicle. Some schools use walkie-talkies to communicate to more quickly identify students and their vehicles to speed loading.
Mode Prioritization	Some schools have a priority pick-up line for carpools and others have priority days for walking.
Road Closures	Some schools temporarily close a roadway around the school campus to private vehicles to reduce chaos in the drop-off/pick-up loop and prioritize bus travel to the school.

From the feedback of school administrators as well as conversations with school resource officers, some of these strategies are more resource intensive than others. Typical resources needed include:

- Cones
- Movable barriers
- Walkie-Talkies
- Cardboard signs
- Staff and staff training
- Prizes
- Smart Phones
- Parent cooperation

Some of the school administrators were unaware of the resources that might be available to them from the City, school district, sheriff's office, or other entity. This led to the creation of a *"Who do I Call"* information sheet that will be shared district wide. More information is provided in the subsequent section.

Incorporation of Public Feedback

School Survey results

Conversations with principals

Feedback from stakeholders, esp. City Tampa

Committee Feedback

School Boundary and Repurposing Study

3. Educational and Encouragement Strategies

Successful components of Safe Routes to School (SRTS) programs include educational and encouragement strategies, as defined below.

Education: Education focuses on classes and activities to teach students, parents, and community members safe road behavior. Students learn the benefits of walking and biking to school and are equipped with the tools to do so safely. Programs for parents, caregivers, and school administrators provide information on how to build and sustain a SRTS program for their community.

Encouragement: Encouragement programs focus on promoting active modes of transportation through events and activities. These programs generate enthusiasm for walking, and biking, and taking the bus to school and result in a growing interest in families choosing to view active modes of transportation as a viable option for their daily travel to school. The goal is to get students excited about walking and biking, and taking the bus to school.

Best Practices for Effective Education and Encouragement Campaigns

1. **Accessible Communication Methods:** Equitable programs plan for language and technology barriers. This could include hiring bilingual staff, providing materials and resources in multiple languages, sharing information in a variety of ways (i.e., phone calls, emails, social media, website, newsletters, text messaging, or paper flyers) and coordinating with a local champion.

2. **Prioritizing Underserved Schools**: SRTS programs can serve the largest number of students by prioritizing low-income and underserved schools. Low-income students typically make up the largest percentage of students who walk to school.
3. **Reduce Barriers to Participation:** Provide a variety of free and low-cost resources to encourage participation. Host inclusive events for all abilities. Engage with Special Education staff and students with physical challenges early in the planning process to identify creative ways for getting involved. For example, begin morning events at the time students begin to arrive, including those who arrive early for childcare or free and reduced cost meal programs.
4. **Use a Combination of Education and Encouragement Strategies**: Successful SRTS programs provide a variety of programmatic elements to attract interest. Combining in-person and online events with school campaigns or policies provides more opportunities for students to engage and for the school population to own the process. Ideas include creating weekly walks, establishing park and walk locations, hosting school competitions, and other encouragement events for the entire school to participate.

Educational Strategies

Based on feedback from the school administrators, student families, and the stakeholder group, educational strategies were identified that have been successfully implemented at some schools in the district or could be considered for schools in the district. **Table 3** provides an overview of program types, the program goal, target audience and typical organizer, and a description of the strategy.

Table 3: SRTS Educational Strategies

Program	Goal	Target Audience/Typical Organizer	Description
Bicycle Rodeo/Clinic	Teach and practice bicycle handling skills	Grades 3+/ PE Teachers	A Bike Rodeo/Clinic is a tactile learning event where students practice and develop bicycle handling skills. Students build skills fostering confident riding through learning proper helmet use, balance, safety, awareness, and rules of the road. Courses simulate and prepare students for real roadway experiences. Rodeos can include bike or helmet fittings and giveaways and feature bike maintenance workshops for older students.
Adapted Bicycle Rodeo/Clinic and School-	Teach varying levels of physical and mental	Grades Pre-K+/ PE Teachers	Incorporating adapted programming for different mental and physical abilities is an important element in an equitable SRTS program. The main difference with adapted programs for individuals

Table 3: SRTS Educational Strategies

Program	Goal	Target Audience/Typical Organizer	Description
based Curriculum	abilities and the same traffic safety lessons		with disabilities is the need for additional time or teaching strategies that are more specialized.
Drop-off and Pick-up Campaign	Teach best practices for vehicle drop-off and pick-up and reduce safety conflicts	Grades Pre-K+ and Guardians/ School Administrators and PTA	Morning arrival and afternoon departure times cause congestion and create conflicts that can be extremely dangerous for student safety. Launching a Drop-off and Pick-up Campaign includes sharing information in multiple formats about safe practices when dropping off and picking up students. Resources should include information about site-specific practices, tips on good behaviors, and reinforcement of the importance of using designated student loading zones.
Parent and Caregiver Education	Teach and empower the school community tools to lead SRTS efforts	Grades Pre-K+ (Note: might not be applicable for HS Parents) and Guardians/School Administrators, PTA, and outside facilitators	Parent and Caregiver Education activities offer parents and caregivers the opportunity to learn and get involved in their student's school. An activity such as "Coffee with the Principal" is a resource for parents and caregivers to develop a direct relationship with school administrators, ask questions, and/or share their thoughts in an informal setting. Hosting Parent and Caregiver Education helps build a stronger walking and biking school community.
Safety Assemblies	Teach safe bicycle and pedestrian fundamentals	Grades Pre-K+/ School Administrators	Safety assemblies are interactive learning opportunities focused on teaching students the fundamentals of being a safe pedestrian and bicyclist. Assemblies for older students focus on the safety of all road users, which is especially important as students learn to drive. Topic ideas include: how to be a safe road user, safety tips to minimize distracted walking/biking/driving,

Table 3: SRTS Educational Strategies

Program	Goal	Target Audience/Typical Organizer	Description
			benefits of active transportation, and sustainability/climate.
Classroom Curriculum	Teach safe bicycle and pedestrian fundamentals	Grades Pre-K+/School Administrators and Teachers	Similar to safety assemblies but curriculum is provided in a smaller, more intimate setting, such as a classroom or afterschool program.
Field Guide/ Coloring Book/ Educational Booklets	Teach safety fundamentals in an engaging, less traditional format	Grades Pre-K+/ School Administrators, PTA, and Teachers	Educational resources can be developed and packaged together into booklets, brochures, field guides, or coloring books. Each page can include educational opportunities that involve learning safety tips/rules, best practices for walking and biking, or building a more inclusive transportation vocabulary.
Great American Teach In	Educate students about transportation planning	Grades K – 12/ School District and School Administrator	City of Tampa, Hillsborough TPO and other local agency staff can share information about careers in Transportation Planning that also educate students about the transportation challenges we face in our communities and how students can help create more mobility choices to their school.

Encouragement Strategies

Based on feedback from the school administrators, student families, and the stakeholder group, encouragement strategies were identified that have been successfully implemented at some schools in the district or could be considered for schools in the district. **Table 4** provides an overview of program types, the program goals, target audience, and a description of the strategy.

Table 4: SRTS Encouragement Strategies

Program	Goal	Target Audience/Typical Organizer	Description
Back to School Campaign	Encourage safe walking, biking, and driving behaviors	Grades Pre-K+ and Guardians/School Administrators and PTA	A Back to School Campaign focuses on the time when students are heading back to school after summer or winter vacation. Strategies focus on encouraging safe and healthy behaviors for walking, biking, or vehicle-based drop-off and pick up. In addition, schools should remind families about the benefits of walking and biking to school.
Safe School Zone Campaign	Encourage slower speeds and safer driving in school zones	Grades Pre-K+, Guardians, and general traveling public/School Administrators and local agency staff	A Safe School Zone Campaign focuses on encouraging drivers to slow down when in the school vicinity. Share basic information about laws in school zones, how speeding affects drivers' ability to react quickly to their environment, and other transportation safety information.
Yard Sign Program	Support a campaign to encourage better driving or increase active modes use	Grades Pre-K+, Guardians, and general traveling public/School Administrators, PTA, and local agency staff	Yard sign programs are a great way to build a community of SRTS champions, by providing families with educational or promotional signage to be posted in their front yards. Signs can encourage slower speeds, promote walking and biking, and remind drivers of the presence of school age children in the area.
Community Bike Ride	Encourage safe bike use in the street	Grades Pre-K+ and Guardians/School Administrators, PTA, local agency	A Community Bike Ride aims to create a collective interest in riding bikes and provides an organized and safe atmosphere for riders to try biking in the street. Ride facilitators

Table 4: SRTS Encouragement Strategies

Program	Goal	Target Audience/Typical Organizer	Description
		staff and bicycling advocacy groups	should be competent cyclists and understand basic rules of the road. This is a great opportunity to incorporate educational activities, such as basic bike skills, the "ABC Quick Check" (air, brakes, and crank and chain), and rules of the road.
Promotional Competitions and Incentives	Promote and celebrate active modes of transportation	Grades Pre-K+/School Administrators, PTA and outside facilitators	Promotional Competitions and Incentives are schoolwide or classroom-specific contests aimed at increasing walking and biking. Competitions can be modified depending on the school but should focus on challenging students to increase levels of physical activity. Ideas include Mileage Club competition where the student with most miles walked wins, Walk and Roll to School punch cards stamped every day students walk or roll to school. Golden Sneaker contest is a low-cost do-it-yourself award given to the student who walks to school the most days in a week, month, or year.
Suggested Routes to School Maps	Share safest possible streets to engage in active modes of transportation	Grades Pre-K+ and Guardians/School Administrators and agency staff	Suggested Routes to School Maps include a recommended network of the safest possible streets to walk or roll to school. Identifying the safest possible streets involves analyzing traffic volumes, vehicle speeds, and existing pedestrian infrastructure (such as sidewalks, crosswalks, traffic signals, etc.). These maps should be updated when infrastructure improvements are made. In addition, these routes can be used to encourage safer driving behaviors around the school and ask drivers to avoid roadways included in the Suggested Routes to School Map when possible. This strategy can be paired with the yard sign program above and the wayfinding program below.

Table 4: SRTS Encouragement Strategies

Program	Goal	Target Audience/Typical Organizer	Description
Walk and Roll to School Days	Promote and celebrate active modes of transportation	Grades Pre-K+ and Guardians/School Administrators, PTA, and outside facilitators	Walk and Roll to School Days are organized events where students and families are encouraged to walk, bike, scoot, or skate to school. The event celebrates students who choose to walk or roll to school. Older students can work closely with event organizers to learn how to coordinate and organize similar events for future activity implementation. Schools can participate in individual, district-wide, or national Walk and Roll to School Day events. Some schools choose to participate in "Walktober," a nationwide month dedicated to walking, while other schools institute weekly events such as Walking Wednesday.
Walking School Bus/Bike Trains	Promote and celebrate active modes of transportation together	Grades Pre-K+ and Guardians/School Administrators, PTA, and outside facilitators	Walking School Buses or Bike Trains are programs that are run and supervised by parents/volunteers and help encourage groups of students to walk or bike to school together. A Walking School Bus brings parents and students who regularly walk to school together to walk on their usual route. The bus can "stop" for others to join along an informal or formally mapped out walking route. A Bike Train is very similar to a Walking School Bus but is done on bicycles. Routes can be arranged from nearby neighborhoods or particular starting points. This activity strengthens relationships within the school community by bringing together families who likely live near each other.
Carpool program	Reduce number of single student	Grades Pre-K+ and Guardians/School Administrators,	Informal or formal carpool programs can help connect families that live in the same neighborhood too far from school to walk or bike, but potentially too close to take the bus.

Table 4: SRTS Encouragement Strategies

Program	Goal	Target Audience/Typical Organizer	Description
	vehicles in carlines	PTA, and outside facilitators	By helping school families establish carpools, it can reduce the number of vehicles in the drop-off and pick-up line and on local streets. The school could help facilitate matching of families that are interested and live in the same neighborhood. Safety and background check protocol may need to be established. While the schoolpool program administered through the Tampa Bay Ride Share program has been discontinued, the Tampa Bay Regional Transportation Authority (TBARTA) runs a regional carpool program. More information can be found here: https://www.tbarta.com/en/commute-tampa-bay/carpool/
Crossing Guard Appreciation Day	Celebrate crossing guards and encourage safe walking routes to school	Hillsborough County Sheriff's Office/School Administrators and PTA	Event to recognize the valuable role crossing guards play in the regional transportation network.
Demonstration Projects/Pop-ups	Promote active modes and highlight opportunities for improving safety	Potential at top ranked schools for transportation safety needs	Demonstration projects or pop-ups are events that showcase temporary infrastructure focused on improving safety for active transportation modes.
Temporary Wayfinding/ Placemaking	Promote safest infrastructure within the community and build	General Public	Wayfinding signage and other placemaking activities can build community and encourage use of active modes. Temporary wayfinding can be installed on most frequented routes or along preferred routes. Spray chalk or other temporary materials can be used. This

Table 4: SRTS Encouragement Strategies

Program	Goal	Target Audience/Typical Organizer	Description
	community spirit		strategy can be paired with the yard sign program.
Crosswalks to Classrooms	Increases visibility of crossing locations around schools	General public/Local agency and advocacy groups	Crosswalk murals can increase the visibility of crossing locations within school zones and result in slower driving speeds. The City of Tampa launched this program in 2020 and the Hillsborough County Complete Streets Guide provides additional information related to the applicability of painted intersections in the region.
Here comes the Bus	Increases communication between district and bus riders	Students and guardians/School Transportation Services	HCSD launched a program in 2022 to track school buses and communicate bus times with students and guardians. This can reduce the amount of time a student is waiting for a bus and inform guardians when their student has gotten on the bus and off the bus. With more certainty around bus arrivals, guardians may be more likely to allow their student to take the bus to school. Phase I of the program was rolled out in September 2022 (bus tracking). In February 2023, the system will be upgraded to provide students with RFID-ridership ID cards that will allow a parent or legal guardian to be notified when their student gets on or off the bus. Additional details can be found here: Transportation Services / Here Comes the Bus FAQs (hillsboroughschools.org)

Implementation Considerations

There can be barriers to the successful implementation of educational and encouragement strategies that should be considered as programs and activities are developed for specific schools. Some potential challenges to consider include:

1. Is there a champion to promote Safe Routes to School activities beyond a single event? If not, is there someone who might be interested if training and resources were provided?
2. Is there an engaged PTA that can help promote programs and activities? If not, are there other organizations that could help develop Safe Routes to School programs and develop capacity in others?
3. Do students have access to bicycles, locks, and means to repair a bicycle? If not, is there a local group, like the Boys and Girls Club, that could help provide bicycles and other accessories?

Identifying and addressing barriers up front is critical to developing a program that has lasting benefit beyond one event or school year.

Additional Encouragement and Educational Opportunities

In addition to the well-established Safe Routes to School encouragement and educational strategies noted in Table 3 and Table 4, the stakeholder group identified additional strategies that could be considered in the region.

Establish School District Wide Transportation Planner Position

The Hillsborough County School District does not currently have a position dedicated to transportation planning that would provide support at the individual school level to champion walking and bicycling to school, as well as provide support to individual schools related to other transportation planning challenges. The role could oversee the collection of school transportation data to track progress, organize education and encouragement activities at local schools, and promote drop-off and pick-up best practices. This person could also coordinate with the appropriate local agency to implement engineering countermeasures, like the ones identified in the school specific chapters of this report, at schools around the district.

Green Team Collaboration

As a part of the HCPS sustainability efforts, all schools and facilities are expected to form a Green Team to support district goals related to sustainability and energy conservation. Transportation is the largest contributor to CO2 emissions in the Tampa Bay region. Walking, biking, and taking transit are the most sustainable forms of transportation and walking and bicycling to school emit no carbon emissions. The district should incorporate transportation strategies into training sessions and available resources for each school. More information about the Green Team program can be found here: https://www.hillsboroughschools.org/Page/8355

Empower Tampa Youth to be Vision Zero Ambassadors

The City of Tampa Vision Zero Action Plan contains strategies to develop youth as Vision Zero Ambassadors. Specific Actions planed as part of the Vision Zero effort include:

a. Continue to implement Crosswalks to Classrooms projects

b. Develop a Vision Zero-focused After School &/Or Summer Camp class focused on Vision Zero and safe transportation
c. Work with the Mayor's Youth Corps on an annual transportation safety project
d. Encourage greater student participation in walking, biking, and taking the bus to school
e. Organize city staff to serve as Sidewalk Stompers Ambassadors

The City of Tampa should collaborate with the school district to implement this educational and engagement strategy.

Geofencing

The Hillsborough TPO has funding to conduct a pilot geofencing program to send targeted messages to people who pass by certain locations in the roadway system. The program would send targeted educational and encouragement materials to people who routinely travel to and around schools to inform them of safety laws and provide information related to alternative modes of travel. Messages could also be sent to people who routinely use the car drop-off/pick-up loop to inform them about opportunities to form a carpool or how to take the school bus, as well as include educational materials about walking and bicycling routes to the school. This technology has been used by the Florida Department of Transportation and CUTR within the region.

Speed Enforcement Strategies

Senate Bill 410 (SB 410) would allow Florida school districts to install speed detection cameras in school zones. The registered owner of vehicles captured driving 10 or more miles above the limit in an active school zone could face a fine of $158 under the draft law, with the fine intended to fund school transportation and safety initiatives. This bill was not calendared for a second reading in 2022 and did not move forward. However, it may be brought back in 2023. Should it become law, a pilot project around a few school sites could provide data to determine if the program should be considered at all school zones throughout the district.

Although automated speed enforcement is not currently legal in school zones, the school district could partner with local law enforcement to install speed detection cameras at select locations and send educational/warning letters to the registered owners of vehicles that speed through school zones. This could be established as a pilot program to test the effectiveness of automated speed enforcement and establish parameters should automated speed enforcement in school zones become legal in Florida.

The district could also partner with local agencies and local law enforcement to place portable speed feedback signs around schools with high levels of perceived speeding. This would allow for more formal documentation of speeding issues and identify potential time periods when local law enforcement could target enforcement.

Automated Enforcement of Illegal Bus Passing

Brevard Public Schools partnered with the safety technology company BusPatrol to use Artificial Intelligence (AI) cameras to deter illegal bus passing. Ten school buses were equipped with cameras and other sensors that captured the license plates of vehicles that pass a bus while buses are stopped and have their stop arms deployed. Under state law, vehicles must stop when school buses have their stop arms deployed. During the 45-day pilot period, 784 vehicles were captured illegally passing school buses and the registered owners of the vehicles were sent a letter informing them of the laws related to school buses. To help inform future legislation, the HCPS could conduct its own pilot program to determine to determine the safety benefits to students taking the bus.

Portable Speed Bumps

Image 6: Portable Speed Bumps

Speeding is a common issue on many roadways adjacent to school campuses. Constructing traffic calming devices can be expensive and take a lot of time to implement. There can also be some uncertainty about the best placement of permanent devices for maximum benefit. Portable speed bumps could be piloted at schools throughout the district to determine the effectiveness of traffic calming devices while longer term solutions are developed and funded. These could also be used when schools have special events. An example of a portable speed bump is shown on Image 6.

School Streets

Many communities temporarily close roadways around schools to provide a car free area and promote walking, known as School Streets. This strategy works best for neighborhood schools where the roadway subject to the closure does not accommodate through vehicle traffic and where the impact to adjacent residents is minimal, such as a short block with no driveway access. These zones help to promote walking and bicycling as viable options for school travel, and while vehicle travel to the schools is still permitted, it is not prioritized over active travel modes.

Magnet School Busing Programs

The survey results of magnet school families indicate that one of the barriers for their student taking the bus to their magnet school is the total travel time, with some student travel times exceeding 90 minutes each way. In these instances, many families prefer to drive their student to school as the driving travel time is significantly lower. Changes aimed at reducing the total bus travel time to and from school for magnet school students could increase the number of students that take the bus. While busing to magnet

schools is typically provided at no cost to students, there may be opportunities to charge for the incremental cost of improved service. As some families may not be able to pay the incremental cost for better service, bus sponsorships to those families could be provided.

Health Risk Incorporation

The Hillsborough TPO recently prepared a Health Risk Assessment for the County, which found that health outcomes can be dependent on socioeconomic and environmental factors. Communities where people can use active transportation modes for daily travel were associated with improved health outcomes, and communities that have a high share of long vehicle comments, high crash areas, and high proximity to heavily traveled roads and the associated poor air quality have poorer health outcomes. Strategies that increase the ability of residents to allow their children to walk or bike to school, like improved crossings, closing sidewalk gaps and reducing the speed of vehicle travel to make the walking experience more comfortable, would improve the overall ability of residents in that area to walk or bike for other trip purposes. Future updates to the school site selection for future Safe Routes to School focus efforts should incorporate health risk as a selection criterion.

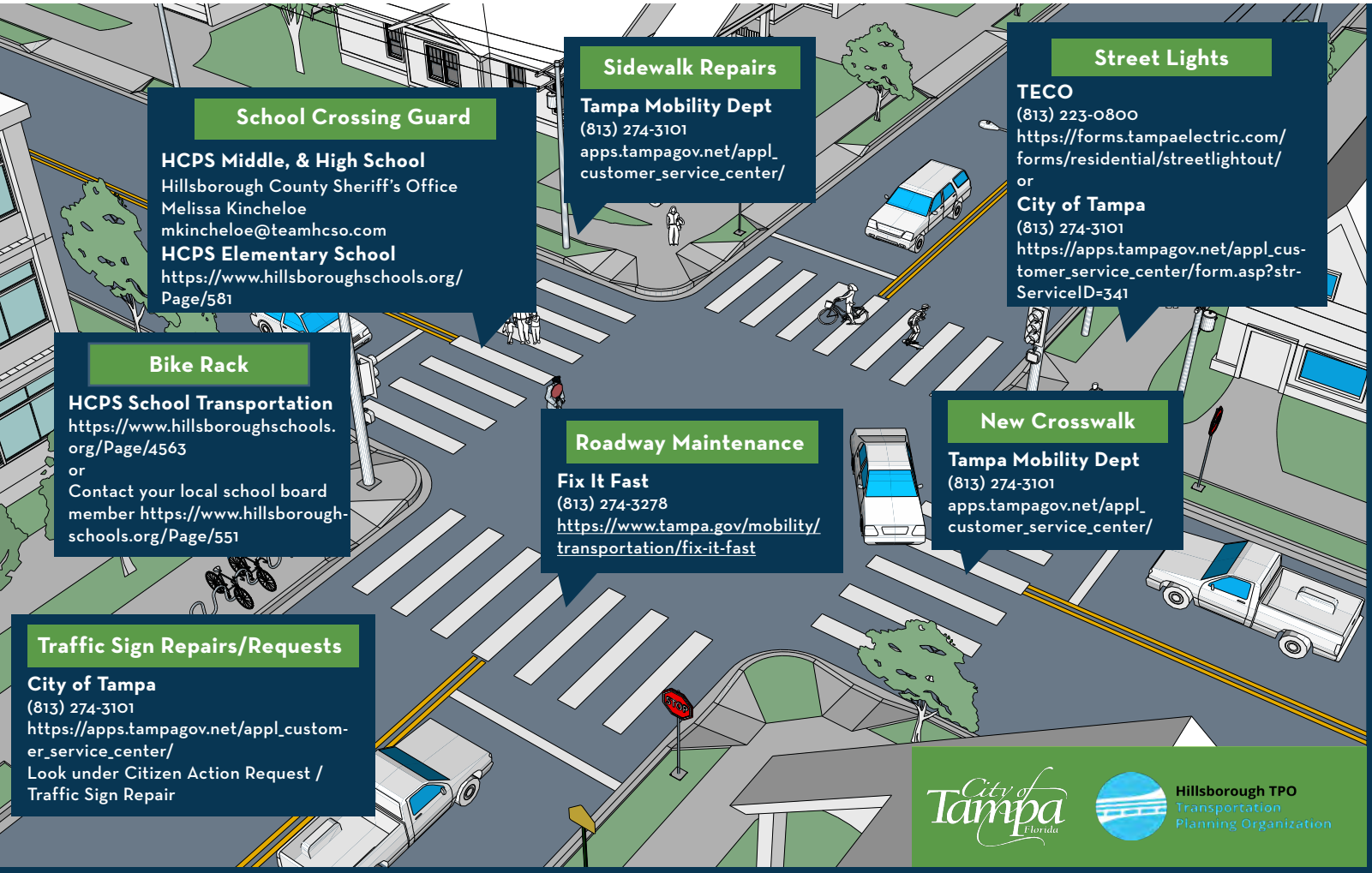
District Specific Educational and Encouragement Strategies

Feedback from school administrators, the project team and the stakeholder group led to the development of district specific information, including a *"Who do I Call?"* flyer and a yard sign program. The audience for the *"Who do I Call?"* flyer is school administrators, with a draft flyer shown on **Figure 1**. Information such as reporting damaged infrastructure, requesting a bike rack, or requesting a school assembly is provided.

A yard sign program was also developed. The target audience for these signs would be the general traveling public as well as students and their families. Messages targeted to the general public are aimed to slow vehicle travel and make people aware that students may be walking in the area. Yard signs can also be used as a wayfinding element as part of a walk or bike to school day to highlight the most appropriate route to school. Example yard signs are shown on **Figure 2**, **Figure 3** and **Figure 4** with additional yard sign options provided in **Appendix D.**

WHO DO I CALL?

FOR SCHOOL AREA SAFETY SERVICES IN THE CITY OF TAMPA



School Crossing Guard

HCPS Middle, & High School
Hillsborough County Sheriff's Office
Melissa Kincheloe
mkincheloe@teamhcso.com
HCPS Elementary School
https://www.hillsboroughschools.org/Page/581

Sidewalk Repairs

Tampa Mobility Dept
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

Street Lights

TECO
(813) 223-0800
https://forms.tampaelectric.com/forms/residential/streetlightout/
or
City of Tampa
(813) 274-3101
https://apps.tampagov.net/appl_customer_service_center/form.asp?strServiceID=341

Bike Rack

HCPS School Transportation
https://www.hillsboroughschools.org/Page/4563
or
Contact your local school board member https://www.hillsborough-schools.org/Page/551

Roadway Maintenance

Fix It Fast
(813) 274-3278
https://www.tampa.gov/mobility/transportation/fix-it-fast

New Crosswalk

Tampa Mobility Dept
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

Traffic Sign Repairs/Requests

City of Tampa
(813) 274-3101
https://apps.tampagov.net/appl_customer_service_center/
Look under Citizen Action Request / Traffic Sign Repair

City of Tampa Florida

Hillsborough TPO
Transportation Planning Organization

REPORT SAFETY CONCERNS

TAMPA MOBILITY DEPT.
General Traffic
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

TAMPA MOBILITY DEPT.
School Zone/Area Safety
(813) 274-3101
apps.tampagov.net/appl_customer_service_center/

FDOT SAFE ROUTES TO SCHOOL PROGRAM, DISTRICT 7
School Zone Safety
https://www.fdot.gov/Safety/programs/safe-routes-quicklinks.shtm

HILLSBOROUGH COUNTY PUBLIC SCHOOLS
Bus Stop Too Far or Unsafe
(813) 982-5500
https://www.hillsboroughschools.org/transportation

ENCOURAGE WALKING

SIDEWALK STOMPERS
Walk to School Programs
Target Audience: All Ages
https://sidewalkstompers.org/

EDUCATIONAL PRESENTATIONS

Bicycle Clinic

TARGET AUDIENCE: PE Class
St. Joseph's Children's Wellness & Safety Center
(813) 615-0938
kristi.nalls@baycare.org

Biking Walking Curriculum

TARGET AUDIENCE: 1st & 4th Grade
MORE HEALTH, Inc.
(813) 288-0378
https://www.morehealthinc.org/education/#Lessons-Grades-K-5
clemaster@morehealthinc.org

Transportation Safety Presentation/Campaign

TARGET AUDIENCE: All Ages
Bike/Walk Tampa Bay
https://walkbikedrive.org/
JMBond@usf.edu

Driver Safety Education

TARGET AUDIENCE: High School
FDOT Community Traffic Safety Team
http://tampabaytrafficsafety.com/

Vision Zero Safety Speaker

TARGET AUDIENCE: All Ages
https://www.tampa.gov/visionzero
https://planhillsborough.org/vision-zero/

Figure 1

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Yard Sign Option 1

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

Figure 2

TAMPA SCHOOL SAFETY

Tampa
School Transportation
Safety Study

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

Yard Sign Option 2

Hillsborough TPO
Transportation
Planning Organization

City of Tampa Florida

Figure 3

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

City of Tampa Florida

Hillsborough TPO Transportation Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

Yard Sign Option 3

Figure 4

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

4. Shaw Elementary

Shaw Elementary School is located on N 15th Street with a 2021/2022 school year enrollment of approximately 680 students. The school enrollment boundary area, as shown on Image 7, is about 1 square mile, with many students living within walking distance of the school, about a half mile for K-5 students. Although many students live within a walkable distance to the school, E Fowler Avenue is a barrier to student travel as the eight-lane road is considered a hazard by the school district and students who live north of Fowler Avenue are eligible for school bus service as crossing guards are not present at the Fowler Avenue at N 15th Street intersection. Additionally, the segment of N 15th Street between Fowler Avenue and Fletcher Avenue is the second most dangerous corridor for people walking and biking in the county (Hillsborough TPO Vision Zero Action Plan, 2017). The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school.

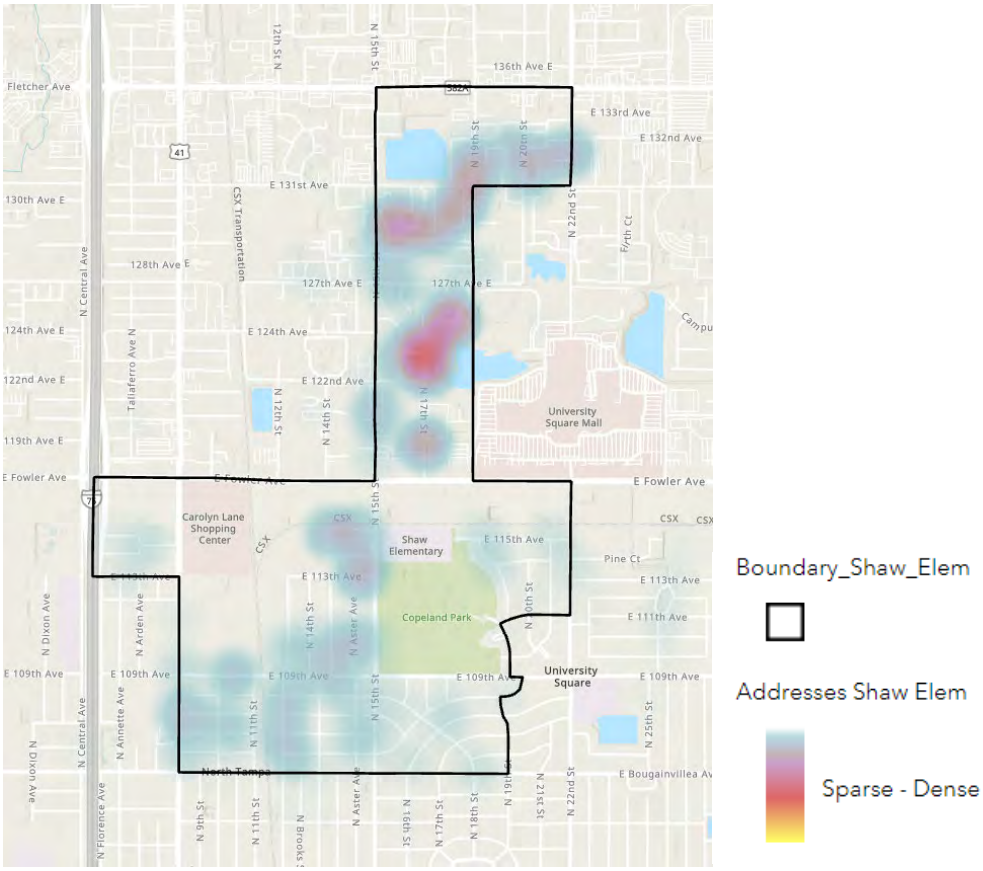


Image 7: Shaw Elementary School Enrollment Boundary

Surrounding Land Use and Transportation System Context

Shaw Elementary School is located on N 15th Street, at the northern edge of a residential neighborhood. Land uses within the enrollment boundary area primarily consist of single-family and multi-family residential uses with commercial uses along E Fowler Avenue. Copeland Park forms the school's southern boundary. Copeland Park was included in a 2021 study, Safe Access to Parks, aimed at identifying safety improvements for people accessing parks in the county. The improvements identified in that report, when implemented, would also benefit students at Shaw Elementary.

Uses fronting N 15th Street are primarily residential, with a high number of driveways connecting to the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. Most intersections along the corridor are unsignalized, except for the intersections of E Fowler Avenue and E 109th Avenue. These two signalized intersections have crosswalks and pedestrian signals and are spaced **almost half a mile apart**. N 15th Street is discontinuous to the south at E Annie Street and to the north at E 143rd Avenue. One proposed alignment of the Green ARTery trail system would traverse through the Shaw Elementary enrollment boundary area and would including modifying 15th Street between 113th Avenue and E Fowler Avenue and 113th Street between Lantana Avenue and N 15th Street to provide a shared use path.

Key characteristics of N 15th Street include:

- North – South Collector
- 24-foot typical cross section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No designated bicycle facilities
- Transit access (HART Route 45)
- An average of 3,790 vehicle trips per day along the roadway

E Fowler Avenue is located to the north of Shaw Elementary. Land uses along the corridor are primarily commercial. Buffered bicycle lanes are provided along the roadway and 5-foot buffered sidewalks are provided on both sides of the street. Access management strategies have been employed along E Fowler Avenue to restrict left-turn movements from individual parcels to improve safety along the corridor. E Fowler Avenue creates a significant barrier to people who live or work north of the roadway to access the school, especially using non-auto modes.

Key characteristics of E Fowler Avenue include:

- East-West Arterial
- Four vehicular travel lanes in each direction, plus turn lanes at intersections
- No on-street parking

- Posted speed limit of 45 miles per hour
- Buffered bike lanes
- Transit access (HART Route 275LX)
- 54,000 vehicles per day on average

E 109th Avenue is located to the south of Shaw Elementary. Uses fronting the street are residential, with driveway presence and spacing similar to N 15th Street. Most intersections along the corridor are unsignalized, with the exception of N Nebraska Avenue, N 15th Avenue and N 22nd Avenue. E 109th Avenue is discontinuous to the west at I-275 and terminates to the east at N 30th Street. Speeding along the E 109th Avenue corridor has been noted by residents of the area as a major concern.

- Key characteristics of E 109th Avenue include:
- East – West Collector
- 22-foot typical cross section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
- No designated bicycle facilities
- No transit service
- An average of 2,080 vehicle trips per day along the roadway

Other streets in the vicinity of the Shaw Elementary are typically residential streets that accommodate two-way vehicle travel. Most have sidewalks on one side of the street, with some neighborhood streets such as N Aster Avenue not having any sidewalks.

The school district provides school bus service to Shaw Elementary with 6 buses serving the school. Many of the routes have only two to three stops in the high-density residential developments to the north of E Fowler Avenue.

School Circulation

Figure 5 displays the general arrival/dismissal operations for the school. There is about 450 feet of storage for the car line from where students get picked up/dropped off to the entrance at N 15th Street and E 113th Avenue. Although the car line is striped for two lines in front of the school, only one lane is used to prevent conflicts between people getting out of and into vehicles and moving cars. There is sufficient storage to accommodate the morning peak hour drop-off demand on-campus, but during the afternoon pick-up, the car line extends into N 15th Street, creating conflicts between through vehicles and queued vehicles, as shown on Image 8. The visitor parking lot also serves as an area where parents or guardians can park and walk their student(s) to/from the entrance.

Image 8: Pick-up Queue Extends onto N 15th Street

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Shaw Elementary School
North 15th Street
Tampa, Florida

Figure 5

Hillsborough TPO Transportation Planning Organization

City of Tampa

Field Observations

Field Observations were conducted on April 28, 2022, during both the arrival and dismissal periods. Several key project stakeholders, including Hillsborough TPO staff and City of Tampa staff, participated in the field review. A summary of key observations from the visit are shown on **Figure 6**. These observations are organized to note where there is incomplete infrastructure, where parents/guardians were observed not to follow the school-identified circulation strategy or the Florida Vehicle Code as it relates to driving laws, or where people were observed driving in excess of the posted speed limit. A final category, labeled as informational items provides additional observations of drop-off/pick-up strategies or the location of crossing guards. This section describes some of the key observations from the field visit.

During the morning drop-off, many students crossed N 15th Street where it intersects with E 113th Avenue even though there is not a marked crosswalk or crossing guard at this location. In the afternoon when students are dismissed, they are directed across the marked crosswalk in front of the school, so there are few students that cross at this location in the afternoon. There is also a bus stop at this intersection. The school crossing guard noted that people routinely drive in excess of the posted speed limit along the school frontage. Recent improvements to fix the pavement at the railroad tracks north of the school worsened the speeding problem and the pavement is more uniform through the area.

The school uses green cones to divide the entrance to the visitor parking lot from the car line. However, parents and guardians routinely run over or move these cones to access the car line (Image 9). A gate or barricade would be a more effective delineator.

The curb radii at the school driveways are large and encourage a high speed of travel pulling into and out of the driveway. Additionally, parents use the extra pavement width and grass shoulder to park and walk their student(s) to the school instead of using the car line or visitor parking lot. Some parents park on the sidewalk (Image 10 and Image 11). These behaviors could result in serious conflicts between vehicles and children walking and biking to school.

Image 9: Cones for Driveway Delineation

Image 10: Car Parked on Sidewalk

Image 11: Car Parked Wrong Way in Landscaped Area

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

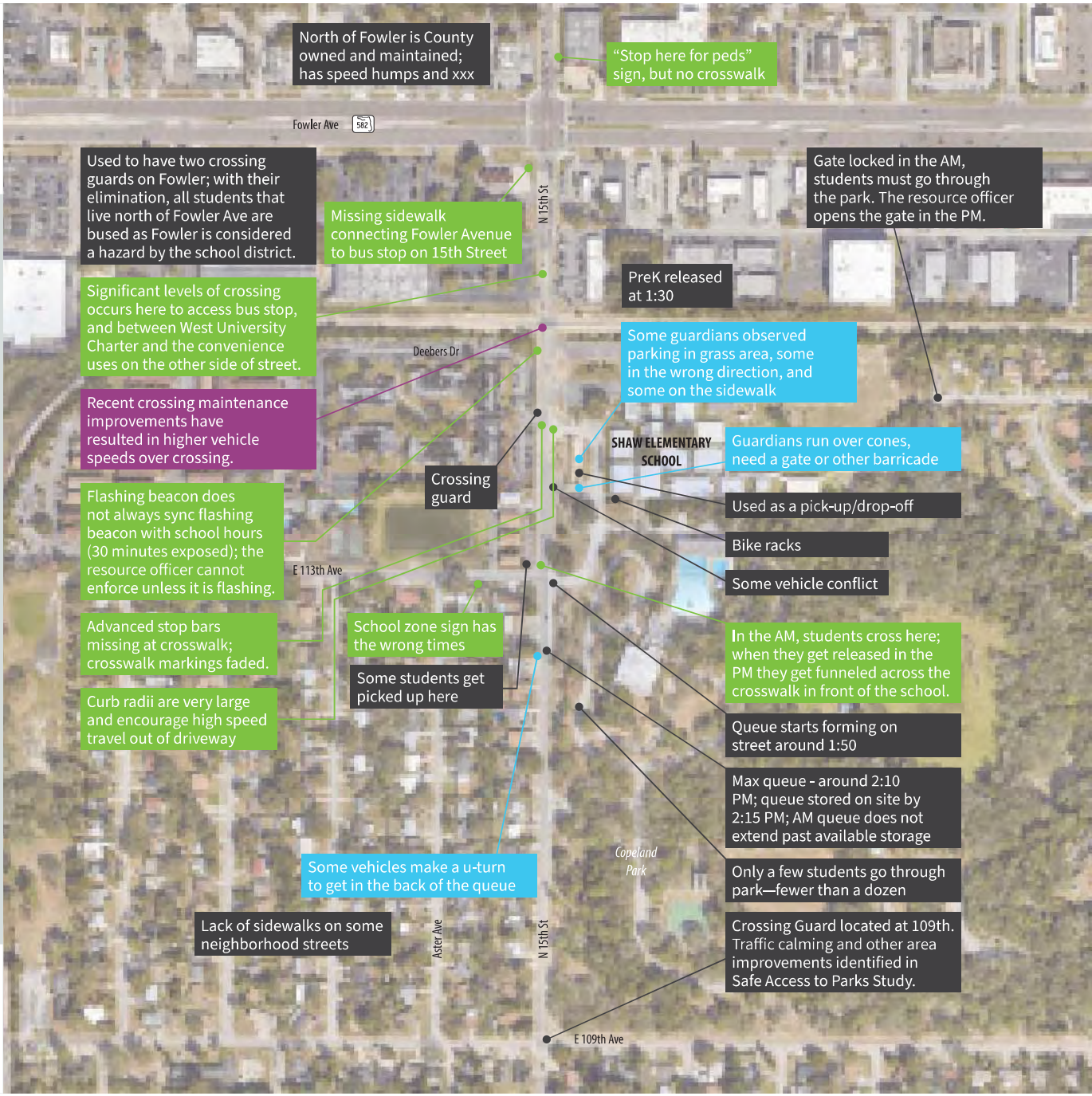
Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- 683 students (96% minority population
- ADT on Fowler Avenue is about 52,400 vehicles/day on average over the past 5 years
- ADT on 15th Street is about 3,200 vehicles/day on average over the past 5 years
- ADT on 22nd Street is about 4,400 vehicles/day on average over the past 5 years (spikes in 2021)
- ADT on 109th Street is about 1,500 vehicles/day on average over the past 5 years



Shaw Elementary School
North 15th Street
Tampa, Florida

Figure 6

Hillsborough TPO Transportation Planning Organization

City of Tampa

Engineering Recommendations

The existing conditions as well as some preliminary roadway modification ideas were presented to project stakeholders, including the school principal. Discussion and feedback focused on identifying a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the Shaw Elementary campus, slow the speeds of people driving, and refine the school circulation to reduce conflicts. As the improvement ideas were refined, they were shared with project stakeholders as well as school staff for their review and feedback. The resulting projects are shown on **Figure 7** and detailed below with the numbers below corresponding to the numbers on the figure.

Planning level cost estimates were developed by Patel, Greene and Associates, LLC (PGA) for specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in **Appendix E**, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop a reasonable cost estimate.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. On N 15th Street, north of Fowler Avenue, Hillsborough County has installed several marked crosswalks connecting transit stops on either side of the street. These crosswalks are accompanied by advance stop bars, Stop Here for Peds (R1-5b) signs, and pedestrian crossing signs. Approximately 250 feet north of Fowler Avenue there are a set of pedestrian crossing signs and Stop Here for Peds signs in both directions, though a crosswalk is not present. Coordinate with the County to remove the signs. Implement the improvements identified in the North 15th Street Vision Zero Corridor Study report. (https://planhillsborough.org/wp-content/uploads/2021/02/ADA_North_15th_Street.pdf) (Planning Level Cost = $)

Image 12: Crosswalk Signage where Crosswalk is not Present

2. Implement the existing Improvement Plan for Fowler Avenue. There are three proposed alternatives all of which include repurposing a travel lane in each direction as a Bus Rapid Transit (BRT) lane, widening sidewalks, and enhancing the bike lanes. Although students who live north of Fowler Avenue are eligible for bus service, some families choose to walk their child(ren) to school. Safety improvements at Fowler Avenue and N 15th Street would be particularly beneficial to these families. (This project is currently being implemented by FDOT as part of a larger project and separate cost estimates were not prepared.)

Image 13: Family Crossing Fowler Avenue at N 15th Street

3. There is a HART bus stop in front of West University Charter High School, on the west side of N 15th Street. While there is a sidewalk south of the bus stop, there is no sidewalk connecting the stop north to Fowler Avenue. It is recommended that a sidewalk connection be constructed to fill this gap in the network. (Planning Level Cost = $)
4. There are two locations near Shaw Elementary School where there are a high number of pedestrians crossing 15th Street, but no marked crosswalk is provided. The first is between West University Charter High School and the retail area on the east side of N 15th Street. The second is

the intersection of N 15th Street and E 113th Avenue. Install raised crosswalks with advance yield lines and signage and consider installing Rectangular Rapid Flashing Beacons (RRFBs)[2] at these locations. (Planning Level Cost = $$)

5. There are several school speed zone signs around the elementary school. It is recommended to bring the existing School Speed Zones into compliance with the latest State Statue. (Planning Level Cost = $$ - if existing equipment can be repurposed or updates are signage only, cost would be lower.)
6. There is an existing marked crossing connecting an apartment complex to the school. The crosswalk was decorated in the past few years, but the decorative paint and original crosswalk markings have faded. It is recommended that the crosswalk markings be updated and converted to a raised crosswalk with advance yield lines and signage and that an RRFB be considered. The school can also redecorate the crosswalk and potentially include the school logo in the design to emphasize that it is a school zone. (Planning Level Cost = $$)

Image 14: Faded Decorative Crosswalk

7. The curb radii at the school driveways are large and encourage high travel speeds into and out of the driveway. It is recommended that the driveways be modified to reduce the speed of turning vehicles. To prevent people from parking across sidewalks and landscaped areas, consider installing a curb with a tight curb radius or some other physical barrier. (Planning Level Cost = $$)
8. The visitor parking lot serves as a useful alternative to the car line. However, because there are no clear parking spaces, the lot is not used efficiently and there is not a clear pedestrian space. We recommend formalizing the visitor lot for parking to maximize spaces and delineate walking routes from the parking area to the school entrance. Initially, parking spots can be delineated

[2] RRFBs have lights that flash to alert drivers that a pedestrian is crossing. The lights are activated when a pedestrian presses a button located near the crosswalk. These devices have been shown to increase yielding rates.

using railroad ties, wheel stops, pavers, or other material. Grass pavers or pavement could be considered for a longer-term installation. (Planning Level Cost = $$$$)

9. Although the car line is striped for two lines in front of the school, only one lane is used to prevent conflicts between people getting out of and into vehicles and moving cars. Consider implementing a dual lane system where drop-off/pick-up can be accomplished from both lanes. The entrance would remain one lane and would widen to two lanes north of the Copeland Park maintenance driveway. Bollards should be used to prevent drivers from switching lanes in the pick-up/drop-off area. The lanes could also be signed to instruct traffic going south on 15th Street to use the left lane and traffic traveling north on 15th Street to use the right lane. Alternatively, a single lane drop-off could be better delineated and formalized. (Planning Level Cost = $$)

Image 15: Unused Pick-up/Drop-off Lane

10. Because parents and guardians do not see or respect the cones the school puts out to separate the visitor lot from the car line, a gate or barricade could be installed to prevent traffic from using this entrance. The barricades can be formed by traditional plastic or metal barricades, or a less conventional material such as permanent or rolling planters or other material. Depending on the type of barrier, the school can paint it, hang a school banner from it, or use a barricade jacket with the school logo. (Planning Level Cost = $$)
11. To prevent conflicts between outbound maintenance vehicles from Copeland Park during arrival and dismissal, consider converting this roadway segment to one-way only either during pick-up/drop-off only or permanently to maximize on-site queue storage. Maintenance access to Copeland Pool may be affected and should be considered in final plans. If the segment is only closed during arrival/dismissal, gates could be added across the westbound side of the road at the intersection of E 113th Avenue and just south of the Copeland Park maintenance driveway. The gates could be signed stating that the roadway is one-way only during school hours. The gates would have to be closed during pick-up/drop-off hours and reopened afterward. (Planning Level Cost = $$)

12. Evaluate the intersection of E 113th Avenue and N 15th Street for an All-Way Stop-Control installation and install if warranted. (Planning Level Cost = $)
13. There is an apartment complex on the north side of E 113th Avenue, but there is not a crosswalk on the north side or the street. Consider constructing a sidewalk on the north side of E 113th Avenue to provide residents with a walking facility. There are utilities in the right of way that could not be avoided, so the addition of the sidewalk would likely require narrowing the roadway to 20 feet. (Planning Level Cost = $$$)
14. Evaluate the potential to provide inset parking on the east side of N 15th Street. On-street parking can be one method for slowing traffic. ($ if only signage is needed).
15. In 2021 the Hillsborough County TPO conducted a Safe Access to Park Study to identify countermeasures to improve safety for people walking and biking to parks in the county. Copeland Park was one of the parks included in the study. It is recommended to implement the improvements identified in the study, which includes installation of additional traffic calming along N 15th Street and E 109th Avenue, construction of sidewalks at main park entrance connecting to the internal walking system, street lighting upgrades, and other transportation system improvements. (Planning Level Cost = $$)
16. Evaluate the potential to install a mini-roundabout at the intersection of E 109th Avenue and N 15th Street as an effort to slow traffic. (Planning Level Cost = $)
17. Provide more accessible and covered bicycle parking to better accommodate students who bike to school. (Planning Level Cost = $$)

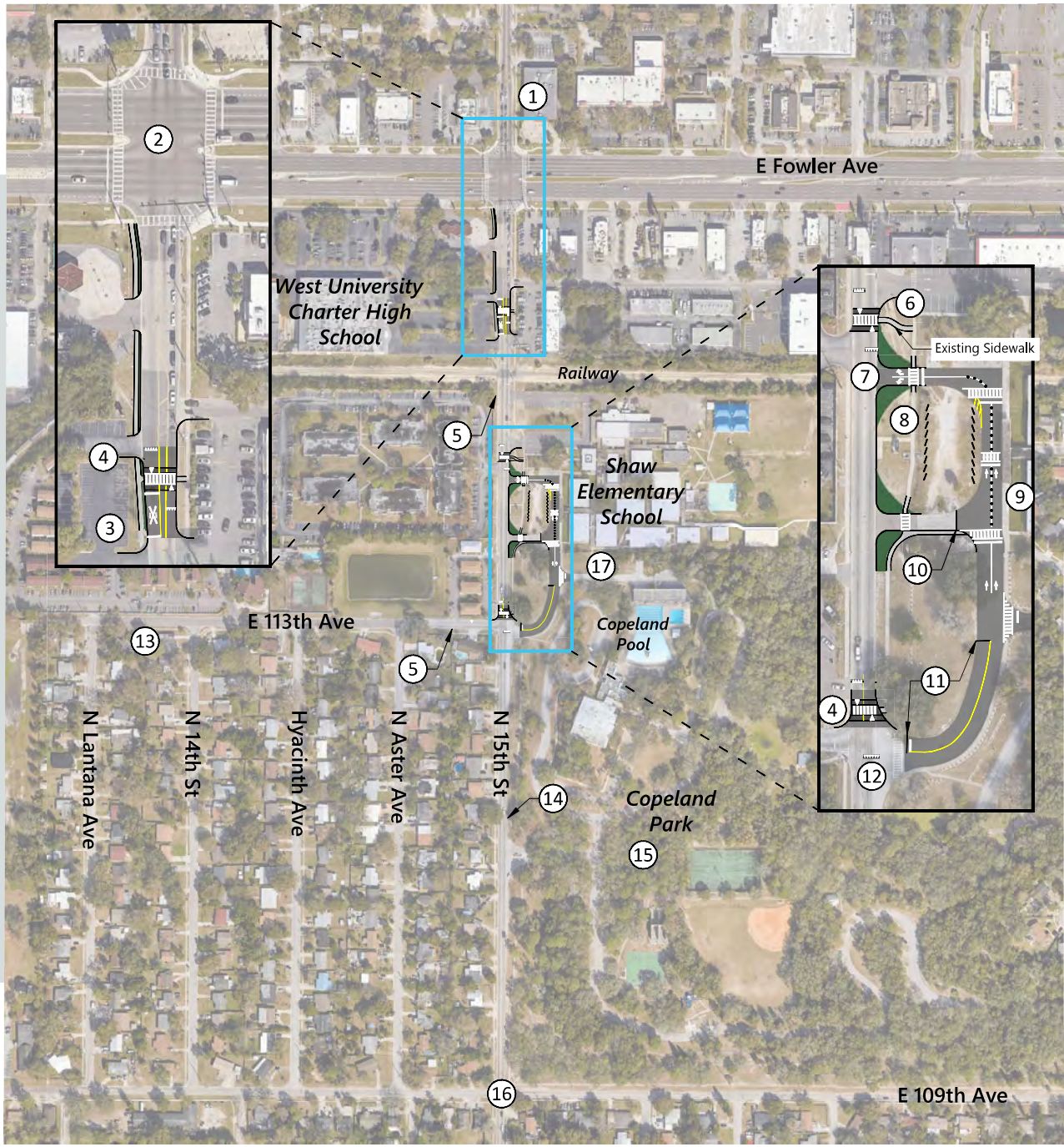
Image 16: Bicyclist at Shaw Elementary

Image 17: Existing Bike Parking at Shaw Elementary

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Coordinate with the County to remove pedestrian crossing signs where a crosswalk is not present; consider installing Advance Pedestrian Crossing sign (W11-2).
2. Implement the existing Improvement Plan for Fowler Avenue.
3. Connect bus stop to Fowler Avenue with a sidewalk.
4. Install raised crosswalk with advance yield lines and signage; consider installing RRFB.
5. Bring existing School Speed Zones into compliance with State Statue and install school zone flashers where appropriate.
6. Update crosswalk markings and convert to raised crosswalk with advance yield lines and signage; consider installing RRFB.
7. Modify driveways to reduce speed of vehicles turning to N 15th Street. To prevent people from parking across sidewalk and landscaped areas, consider installing curb or some other physical barrier.
8. Formalize lot for parking to maximize spaces and delineate walking routes from parking area to school entrance. Initially, parking spots can be delineated using railroad ties, wheel stops, pavers, or other material. Grass pavers could be considered for a longer-term installation.
9. Consider implementing a dual lane pick-up system where pick-up can be accomplished from both lanes. Additional operational details provided in text of report. Sign left lane for traffic going south on 15th Street and the right lane for traffic traveling north on 15th Street.
10. Install a gate or barricade to prevent traffic from using this entrance. Barricades can be formed by permanent or rolling planters, plastic or metal barricades, or other material.
11. Consider converting this roadway segment to one way only either during pick-up only or permanently to maximize on-site queue storage. Maintenance access to Copeland Pool may be affected and should be considered in final plans. Gates could be added and would have to be closed during pick-up/drop-off hours and reopened afterward.
12. Evaluate the intersection of N 15th Street and E 113th Avenue for All-Way Stop-Control Installation.
13. Construct a sidewalk on the north side of E 113th Avenue. This would likely require narrowing the roadway to 20 feet.
14. Evaluate potential to provide inset-parking on the east side of N 15th Street.
15. Implement improvements identified in the Safe Access to Parks Study, which includes installation of additional traffic calming along N 15th Street and E 109th Avenue, construction of sidewalks at main park entrance connecting to the internal walking system, street lighting upgrades, and other transportation system improvements.
16. Evaluate potential to install a mini-roundabout.
17. Provide more accessible and visible bike parking.



Shaw Elementary School
N 15th Street
Tampa, Florida

Figure 7

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

5. Potter Elementary

Potter Elementary School, which is located on E Cayuga Street, had a 2021/2022 school year enrollment of about 470 students. The enrollment boundary area, displayed in Image 16 , has an area of approximately 1.5 square miles. The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school.

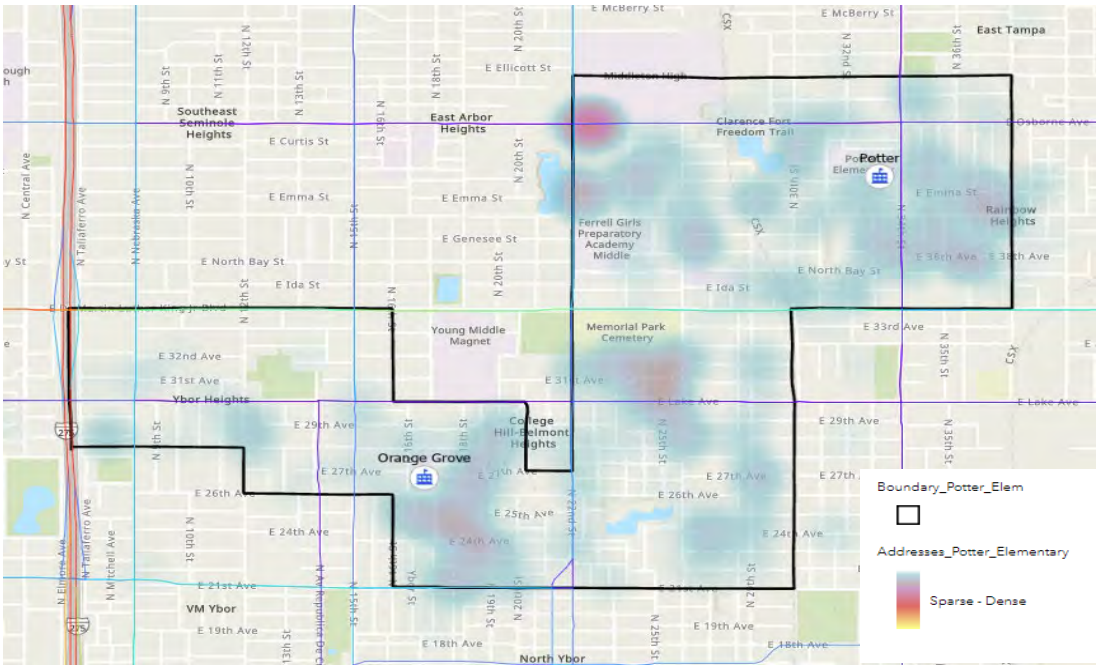


Image 18: Potter Elementary School Boundary

Surrounding Land Use and Transportation System Context

Potter Elementary School is in a residential area with a mix of local serving retail uses. The land uses in the enrollment boundary are primarily single-family and multi-family residential uses with commercial uses along the major roadways including Dr Martin Luther King Jr Boulevard and Nebraska Avenue. There are several other schools in the vicinity which would also benefit from the improvements recommended in this section. 30th Street and 34th Street are primary north-south roads in the area and speeding is a concern on both streets.

Uses fronting E Cayuga Street are primarily residential, with a high number of driveways accessing the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. All of the intersections on the roadway are unsignalized. The street is discontinuous with a railroad dividing the roadway about 250 feet west of N 29th Street.

Key characteristics of W Cayuga Street include:

- East-West Local Street
- Two vehicular travel lanes in each direction, with a pavement width that varies between 20 and 30 feet depending on the presence of on-street parking
- On Street parking, with some exceptions during school hours
- Posted speed limit of 25 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- Five-foot sidewalk on north side of roadway
- Limited curb and gutter

N 34th Street is the eastern boundary of Potter Elementary School. It is a primary north-south connector in the area, leading to higher speeds. In the area, most of the intersections are unsignalized. In the enrollment boundary, there is a signal at N 34th Street and Dr Martin Luther King Jr Boulevard. There are crosswalks with pedestrian signals and push buttons on all four corners at this intersection. There is also a pedestrian hybrid beacon (Image 11) north of Cayuga Street where many students cross.

Key characteristics of N 34th Street include:

- North-South Collector
- Typical 22-foot cross-section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- Four to Five-foot sidewalks on both sides of the roadway
- Transit access (HART Route 5)

- Limited curb and gutter
- 3,800 vehicles per day on average

Image 19: Pedestrian Hybrid Beacon on N 34th Street

N 30th Street is east of Potter Elementary School. Uses fronting the street are primarily residential. While there are some driveways on N 30th Street, many of the driveways are on the side streets. In the vicinity of the school, all of the intersections on the roadway are unsignalized. The City of Tampa has completed a separate review of N 30th Street that will incorporate some of the improvements identified in this study.

Key characteristics of N 30th Street include:

- North-South Local Street
- Typical 22-foot cross-section
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 25 miles per hour
- No bicycle facilities
- Five-foot sidewalks on both sides of the roadway north of E Cayuga Street
- Limited curb and gutter
- 2,300 vehicles per day on average

Dr Martin Luther King Jr Boulevard is located south of Potter Elementary School. Land uses along the corridor are a mixture of residential and commercial. There are few controlled crossings of the roadway, and it serves as a barrier to students who live south of the corridor. The Florida Department of Transportation is funding Complete Streets improvements along the Dr Martin Luther King Jr Boulevard corridor.

Key characteristics of E Dr Martin Luther King Jr Boulevard include:

- East-West Arterial

- Typical 48-foot cross-section with curb and gutter
- Two vehicular travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities
- Five-foot sidewalks on both sides of the roadway
- Transit access (HART Route 32)
- 22,400 vehicles per day on average

School Circulation

Student hours at Potter Elementary School are 7:40 AM to 1:55 PM. Arrival/dismissal operations for the school are displayed on **Figure 8**. The car line is in the teacher parking lot, and there is about 350 feet of storage for the car line from where students get picked-up/dropped off to the entrance of the lot. There are two lanes, one for Head Start and the other for the elementary school. During the afternoon pick-up the queue for the car line extends into E Cayuga Street. The line forms in the westbound direction and creates conflicts for westbound through vehicles. Walkers are released at the same time and walk together to their respective crossings (Image 18).

There are two school buses that pick students up in the morning and three that drop them off in the afternoon. The earliest a student gets picked up on the home end of the trip in the morning is 6:45 AM and the latest a student gets dropped off at their home stop in the afternoon is 2:40 PM.

Image 20: Group of Students N 31st St at E Cayuga St

Image 21: Potter Elementary Afternoon Pick-up Car Line

Field Observations

Field Observations were conducted on May 4, 2022, during the afternoon dismissal. Observations from the visit are shown in **Figure 9**. These observations are organized to note where there is incomplete infrastructure, parents/guardians were observed not to follow the school identified circulation strategy or the Florida Vehicle Code as it relates to driving laws, or people were observed driving in excess of the posted speed limit. A final category, informational items, provides additional observations of drop-off/pick-up strategies or the location of crossing guards. This section describes some of the key observations from the field visit.

Although N 30th Street is classified as a local road, it serves as a primary north-south connection in the area and speeding is a concern. While the posted speed limit is 25 miles per hour, the average speed is 30 miles per hour and the 85th percentile speed is 35 mile per hour. If a student is late for school and the crossing guard is not present, many parents do not let their child(ren) cross here and will drive the child(ren) to school. There is a pedestrian crossing sign at this location, but the crosswalk markings have started to fade (Image 14).

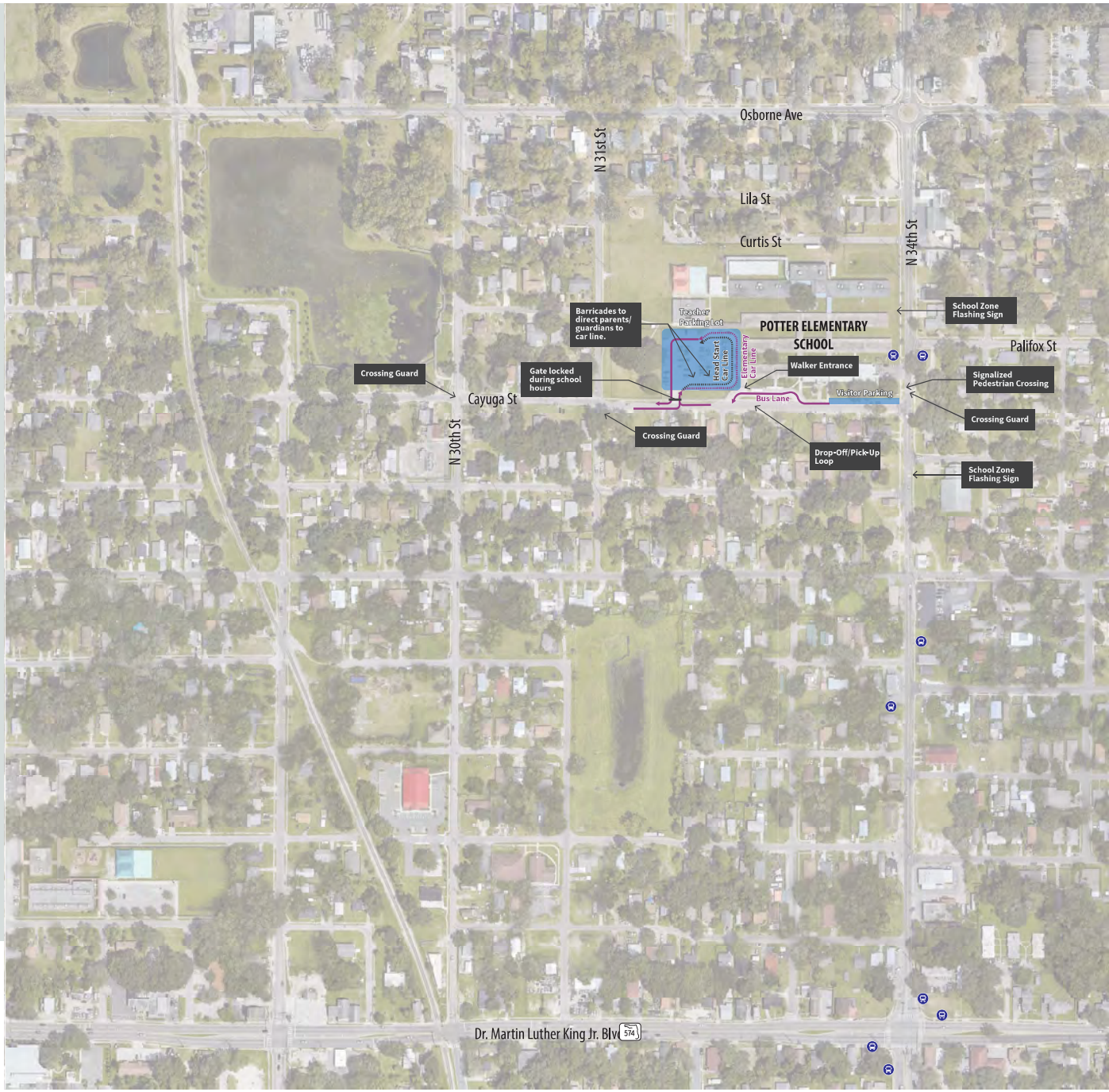
Although not noted during field observations, some students cross the railroad tracks at E Osborne Avenue and N 28th Street and at N 29th Street and E Genesee Street, based on information provided by the crossing guards. There are not adequate pedestrian facilities at these locations.

The car line forms in the westbound direction which causes conflict between westbound through vehicles. Additionally, some parents and guardians coming from the west make a U-turn on E Cayuga Street to get in the back of the car line, which can temporarily block travel in all directions.

Image 22: E Cayuga Street and N 30th Street Crossing

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study



Potter Elementary School
East Cayuga Street
Tampa, Florida

Figure 8

Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- 468 students (97% minority population)
- 3 school buses
- ADT on 30th Street is about 2,300 vehicles/day on average over the past 5 years
- ADT on 34th Street is about 3,800 vehicles/day on average over the past 5 years
- ADT on 40th Street is about 3,000 vehicles/day on average over the past 5 years

Potter Elementary School
East Cayuga Street
Tampa, Florida

Figure 9

Hillsborough TPO Transportation Planning Organization

City of Tampa

Engineering Recommendations

The existing conditions as well as some preliminary roadway modifications were presented to project stakeholders, including the school principal, for discussion and feedback to identify a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the Potter Elementary campus, slow the speeds of people driving, and refine the school circulation to reduce conflicts. As the improvement ideas were refined, they were shared with project stakeholders including school staff for their review and feedback. The resulting projects are shown on **Figure 10** and detailed below with the numbers correspond to the numbers on the figure.

Planning level cost estimates were developed by PGA for the specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in Appendix E, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop a reasonable cost estimate.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. The sidewalk on the north side of E Osborne Avenue ends west of the railroad tracks at N 28th Street. The tracks are owned by CSX. Install a raised crosswalk connecting the sidewalk on the north side of the road to the sidewalk on the south side and work with CSX to upgrade crossing safety equipment. (Planning Level Cost = $ - does not include gate arm equipment upgrades)
2. The crosswalk markings at the intersection of E Osborne Avenue and 30th Street have faded and are barely visible. It is recommended the crosswalk markings be refreshed on all four legs of the intersection. (Planning Level Cost = $)
3. Install a double yellow center line on E Osborne Avenue to discourage passing on the roadway. (Planning Level Cost = $)
4. It was noted that parents occasionally park on the sidewalk west of the school entrance on E Cayuga Street to wait for their student(s). When this happens, the students who walk home have to wait for the car to move before they can leave the school. A vertical barrier between the roadway and sidewalk would prevent parents/guardians from blocking the sidewalk. (Planning Level Cost = $)

Image 23: Sidewalk That is Occasionally Blocked by Parked Vehicles

5. The car line, which forms in the westbound direction, creates conflict with westbound through vehicles. Additionally, some parents traveling from the west make a U-turn on E Cayuga Street to get in the back of the car line, which can temporarily block travel in all directions. To alleviate these conflicts, consider converting Cayuga Street from N 31st Street to N 34th Street to one-way westbound and install two speed humps. The school mascot or a mural could also be painted on this segment to emphasize that it is a school zone. (Planning Level Cost = $$$)
6. In coordination with the conversion of E Cayuga Street from N 31st Street to N 34th Street to one-way westbound change the intersection of E Cayuga Street and N 31st Street to an All-Way Stop. The one-way conversion would also require additional signage at this intersection including a Do Not Enter sign (R5-1) eastbound, and One Way sign (R6-1). Additionally install a No Right Turn sign (R3-1) northbound and a No Left Turn sign (R3-2) southbound. (Planning Level Cost = $)

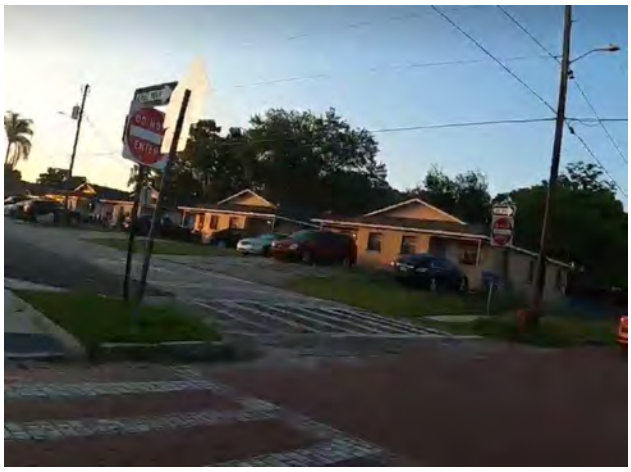


Image 24: Example of Signage for One-Way Streets

7. Install signs prohibiting parking on both sides of E Cayuga Street between N 31st Street to N 34th Street from the bus circulation loop to N 31st Street. (Planning Level Cost = $)
8. With the one-way conversion, install a One-Way sign (R6-1) and No Right Turn (R3-1) sign at the intersection of E Cayuga Street and N 32nd Street to inform northbound drivers that E Cayuga Street is one-way. (Planning Level Cost = $)
9. To encourage drivers to slow down at the school crossing, convert the marked crossing at E Cayuga Street and N 34th Street to a raised crosswalk. Additionally, because it was observed that the pedestrian crossing time is not long enough for the crossing guard to cross all the students gathered at one time, consider giving the crossing guard a key to manually override the signal one to two times during the afternoon dismissal period. (Planning Level Cost = $)

Image 25: One Group of Students Crossing at Pedestrian Hybrid Beacon

10. There are several school speed zone signs around the elementary school. It is recommended to bring the existing School Speed Zones into compliance with the latest State Statue. (Planning Level Cost = $$$ - if existing equipment can be repurposed or signage updates only, cost would be lower.)

Image 26: Example of One Existing School Zone Sign

11. Parents are particularly concerned with their student(s) crossing N 30th Street at E Cayuga Street. To encourage drivers to slow down and to draw attention to the crosswalk, install a raised crosswalk and RRFBs. (Planning Level Cost = $$)
12. There are no stop bar markings at the intersection of E Emma Street and N 30th Street. Install stop bar markings and consider installing marked crosswalks at the intersection. (Planning Level Cost = $)
13. N 32nd Street is a narrow road with low volumes. Remove the school zone sign on N 32nd Street. (Planning Level Cost = $)

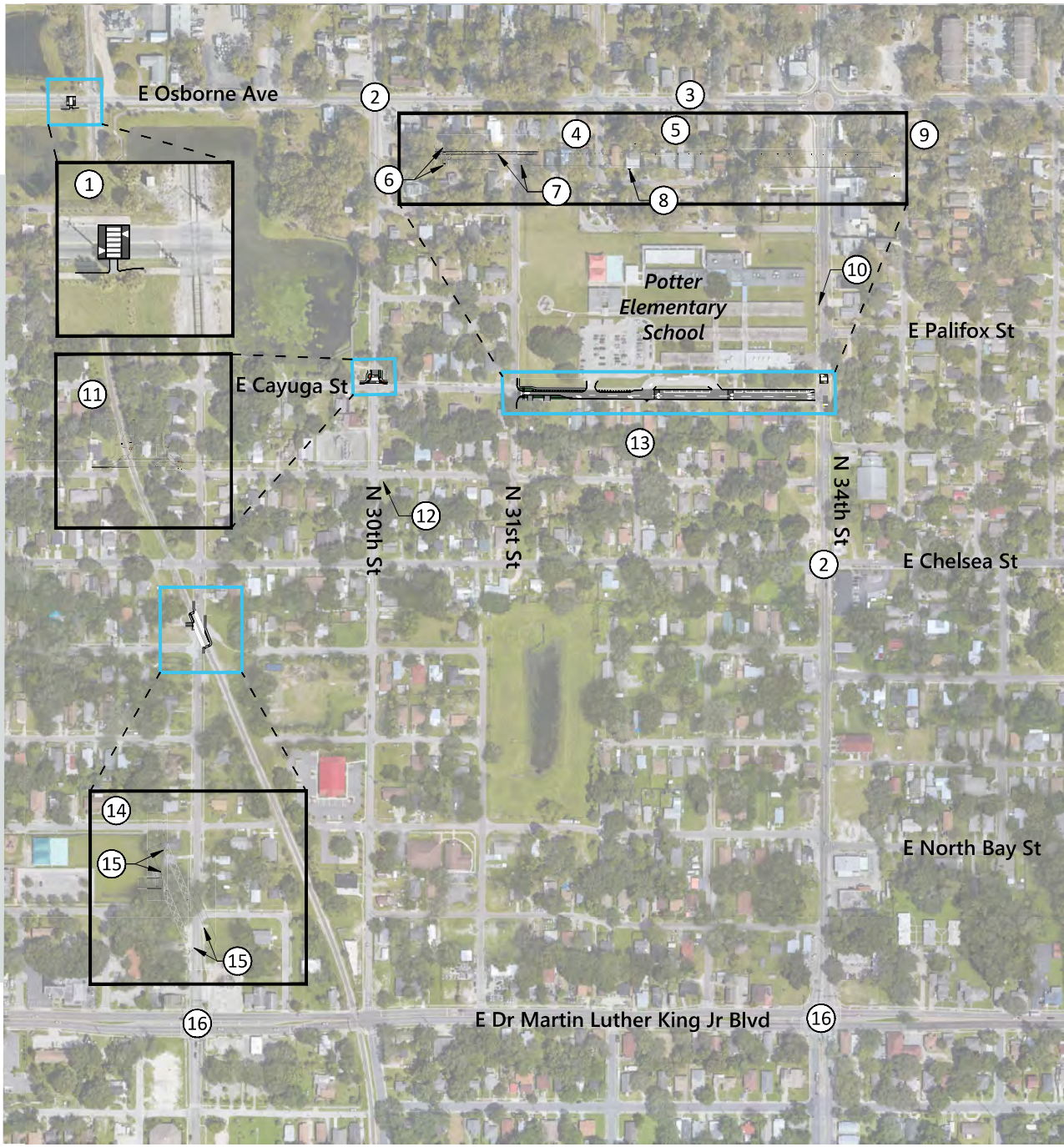
Image 27: School Zone Sign on N 32nd Street

14. There are not clear pedestrian facilities crossing the railroad tracks at N 29th Street and E Genesee Street. The natural path between the sidewalks on the north and south sides of the tracks has pedestrians crossing at an angle to the tracks, which makes it more difficult for pedestrians to see approaching trains. It is recommended to install sidewalks that intersect the railroad tracks at a 90-degree angle. Sidewalks should have detectable warning surfaces before on either side of the tracks. Additionally, work with CSX to upgrade crossing safety equipment. (Planning Level Cost = $)
15. In coordination with the installation of sidewalks at the railroad crossing on N 29th Street at E Genesee Street, install a railing to encourage users to stay on the sidewalk. (Planning Level Cost = $)
16. Add Leading Pedestrian Intervals and bicycle detection at Dr Martin Luther King Jr Boulevard. (Planning Level Cost = $)

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Install a raised crosswalk and work with CSX to upgrade crossing safety equipment.
2. Refresh crosswalk markings.
3. Install double yellow lines on E Osborne Avenue.
4. Add a vertical barrier between the roadway and sidewalk to prevent parents/guardians from blocking the sidewalk.
5. Convert Cayuga Street from N 31st Street to N 34th Street to one-way westbound and install two speed humps. Consider painting the school mascot or a mural on this segment to emphasize that it is a school zone.
6. Convert to an All-Way Stop. Install Stop Sign (R1-1) westbound, Do Not Enter sign (R5-1) eastbound, One Way sign (R6-1), No Right Turn sign (R3-1) northbound, and No Left Turn sign (R3-2) southbound.
7. Install signs prohibiting parking on both sides of E Cayuga Street between N 31st Street and the parking lot driveway.
8. Install One Way sign (R6-1) and No Right Turn (R3-1) sign.
9. Convert crossing to a raised crosswalk. Consider giving the crossing guard a key to manually override the signal.
10. Bring existing School Speed Zones into compliance with State Statute.
11. Install a raised crosswalk and RRFBs.
12. Refresh stop bar markings and consider installing marked crosswalks.
13. Remove the school zone sign on N 32nd Street.
14. Install sidewalks that intersect railroad tracks at a 90 degree angle. Sidewalks should have detectable warning surfaces before on either side of the tracks. Install dynamic envelopes in the roadway on either side or the tracks.
15. Install a railing to encourage users to stay on the sidewalk.
16. Add Leading Pedestrian Intervals and bicycle detection at Dr Martin Luther King Jr Boulevard.



Potter Elementary School
Cayuga Street
Tampa, Florida

Figure 10

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

6. West Tampa Elementary

West Tampa Elementary School is located on West Cherry Street. The school had a 2021/2022 school year enrollment of about 430 students. The enrollment boundary area, displayed in Image 25, has an area of approximately 1.5 square miles. The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school. The school is served by two buses both in the morning and afternoon. The earliest a student gets picked up by the school bus is at 6:30 in the morning and the latest a student gets dropped off in the afternoon from the school bus is 2:30.

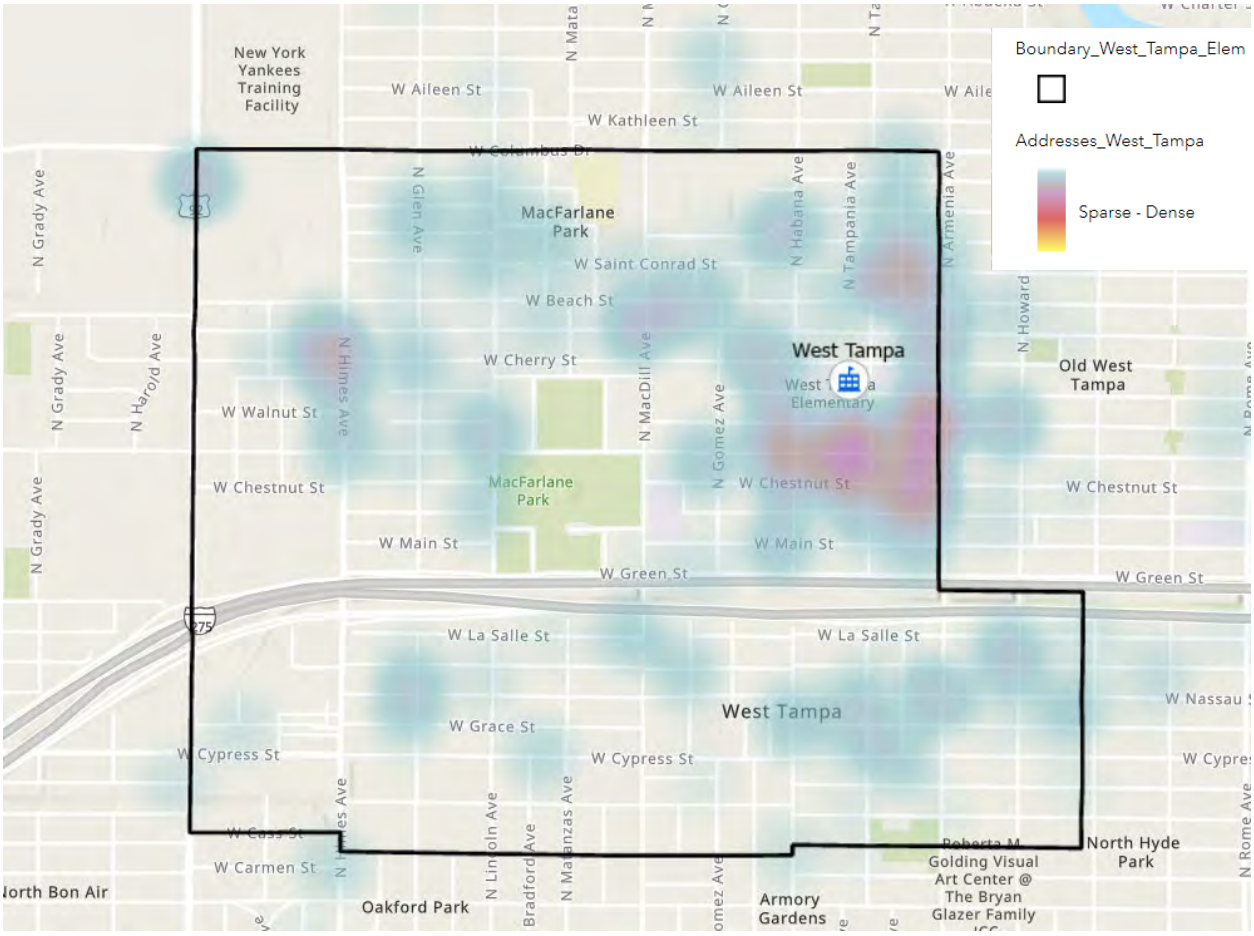


Image 28: West Tampa Elementary Enrollment Boundary

Surrounding Land Use and Transportation System Context

West Tampa Elementary School is on West Cherry Street in a residential neighborhood. Land uses within the enrollment boundary area primarily consist of single-family and multi-family residential uses with commercial uses mostly along W Columbus Drive, N Himes Avenue, W Cypress Street, and N Dale Mabry Highway. I-275 divides the enrollment boundary area.

W Columbus Drive is the northern edge of West Tampa Elementary School enrollment boundary. The land use fronting W Columbus Drive is predominantly commercial with a high number of driveways accessing the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. There is a mixture of signalized and unsignalized intersections. The unsignalized intersections are side-street stop controlled. The signalized intersections have marked crosswalks and pedestrian signals.

Key characteristics of W Columbus Drive include:

- East-West Arterial

- 50-foot to 63-foot typical cross section,
- Three vehicle travel lanes in each direction, median left-turn lanes, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- 5-foot bicycle lanes
- 5-foot sidewalks on both sides of the roadway
- Transit access (HART Route 36)
- An average of 28,700 vehicle trips per day along the roadway

N Dale Mabry Highway is the western limit of the enrollment boundary area. It is a major north-south arterial that provides access to the Hillsborough Community College Dale Mabry Campus and the Tampa Bay Buccaneers Stadium. The corridor has signalized and side-street stop-controlled intersections. Side-streets movements are generally restricted to left-in/right-in and right-out. Driveway access is typically restricted to right-in, right-out. Sidewalks on both side of the road have an approximately 30-foot landscape buffer. Most driveways have marked crosswalks alerting drivers to the potential presence of people walking and biking. Some portions of Dale Mabry Highway are considered hazardous by the school district and the segment between Kennedy Boulevard and Columbus Drive is ranked 12th as a severe crash corridor for people walking and biking in the *Vision Zero Action Plan* (2017, Hillsborough TPO).

Key characteristics of W Dale Mabry Highway include:

- North-South Arterial
- 95-foot typical cross section,
- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the roadway
- Transit access (HART Route 15)
- An average of 59,800 vehicle trips per day along the roadway

N MacDill Avenue is a north-south arterial west of West Tampa Elementary School. The primary land use fronting N MacDill Avenue is residential. There is also a park, a public school, and a private school along the roadway. Many of the driveways are accessed from side streets, resulting in fewer conflicts between vehicles and people walking and biking. The intersections along the corridor are primarily side-street stop-controlled, with signalized intersections at W Columbus Drive, W Spruce Street, and W Cypress Street. The signalized intersections have marked crosswalks and pedestrian signals. There is also a marked crosswalk with a pedestrian hybrid beacon connecting MacFarlane Park to MacFarlane Park Elementary School.

Key characteristics of N MacDill Avenue include:

- North-South Arterial
- 50-foot typical cross section,
- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 35 miles per hour
    - 20 miles per hour in school zone when lights flashing
- 5-foot bike lanes
- 5-foot sidewalks on both sides of the roadway
- An average of 14,450 vehicle trips per day along the roadway

W Main Street is located to the south of the campus and is primarily fronted with single-family residential uses, with a high number of driveways accessing the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. Within the enrollment boundary the intersections along the corridor are unsignalized, though there are several signalized intersections west of the boundary. Main Street is discontinuous to the west at MacFarlane Park.

Key characteristics of W Main Street include:

- East-West Neighborhood Collector
- 40-foot typical cross section,
- One vehicle travel lane in each direction, plus turn lanes at intersections
- On-street parking on both sides of the road
- Posted speed limit of 25 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- 7-foot sidewalks on both sides of the roadway
- An average of 2,500 vehicle trips per day along the roadway

The City of Tampa recently completed a Main Street Neighborhood Commercial District Plan that identifies land use and transportation strategies that promotes the evolution and development of the area while protecting traditional pedestrian oriented patterns, established historic character, and existing businesses and residents of the area. More information can be found here: https://www.tampa.gov/city-planning/main-street.

N Habana Avenue runs along the western edge of West Tampa Elementary School. It is discontinuous to the south at I-275. It is a brick street north of the interstate. The primary land use fronting N Habana Avenue is residential. Many of the driveways are accessed from side streets, resulting in fewer conflicts between vehicles and people walking and biking. Most of the intersections on the corridor are unsignalized except at W Columbus Avenue. The signalized intersection has marked crosswalks and pedestrian signals. The only other marked crossing of N Habana Avenue is at W Cherry Street and W Walnut Street.

Key characteristics of N Habana Avenue include:

- North-South Collector
- 30-foot typical cross section,
- One vehicle travel lane in each direction
- No on-street parking
- Posted speed limit of 30 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- 5-foot sidewalks on both sides of the roadway
- An average of 9,300 vehicle trips per day along the roadway

School Circulation

The general arrival/dismissal operations for the school are shown in **Figure 11**. The car line for the school is on W Walnut Street, which is one-way westbound from N Habana Avenue to N Tampania Avenue. The morning drop-off area is in front of the school building and the afternoon pick-up is located farther west on W Walnut Street, in front of the PE court. The morning drop-off area only has about 150 feet of storage, so the queue spills onto W Walnut Street and N Tampania Avenue (Image 27). The section of N Tampania Avenue between W Pine Street and W Walnut Street is coned off during school arrival and dismissal for busses only (Image 28); one of the recommendations is to formalize this "school street" with the City of Tampa and Tampa Police Department. There are no crossing guards at the two northern corners of the school, so children using these intersections cross themselves (Image 29).

Image 29: Morning Queue on W Walnut St

Image 30: Bus Only Segment of N Tampania Ave

Image 31: Students Crossing Without a Crossing Guard at the Intersection of W Charry St and N Tampania Ave

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

West Tampa Elementary School
West Cherry Street
Tampa, Florida

Figure 11

Hillsborough TPO Transportation Planning Organization

City of Tampa

Field Observations

Field Observations were conducted on May 4, 2022 during the morning drop-off period. Observations from the visit are shown on **Figure 12.** These observations are organized to note where there is incomplete infrastructure, parents/guardians were observed not to follow the school identified circulation strategy or the Florida Vehicle Code, or people were observed to drive in excess of the posted speed limit. Some general informational items are also noted. This section describes some of the key observations from the field visit.

There are few marked crossings of N Armenia Avenue and N Howard Avenue, and if there are curb ramps, they are generally not ADA compliant. There is a pedestrian hybrid beacon across N Armenia Avenue, about 80 feet south of W Pine Street, but there are no curb cuts, and it does not appear to be aligned with any pedestrian desire lines (Image 30).

There was a general concern among crossing guards and residents about speeding in the area and parents and guardians stopping on crosswalks (Image 31). There was also a concern about people driving the wrong way on Walnut Street along the school frontage where travel is one-way westbound.

Image 32: Pedestrian Hybrid Beacon on Armenia Avenue

Image 33: Parent Stopped on Crosswalk at W Walnut St and N Habana Ave

Engineering Recommendations

The existing conditions as well as some preliminary roadway modifications were presented to project stakeholders, including the school principal, for discussion and feedback to identify a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the West Tampa Elementary campus, slow the speeds of people driving, and refine the school circulation to reduce conflicts. Once refined, the recommendations were shared with project stakeholders as well as school staff for their review and feedback. The resulting projects are shown on **Figure 13,** with the numbers below corresponding to the numbers on the figure.

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

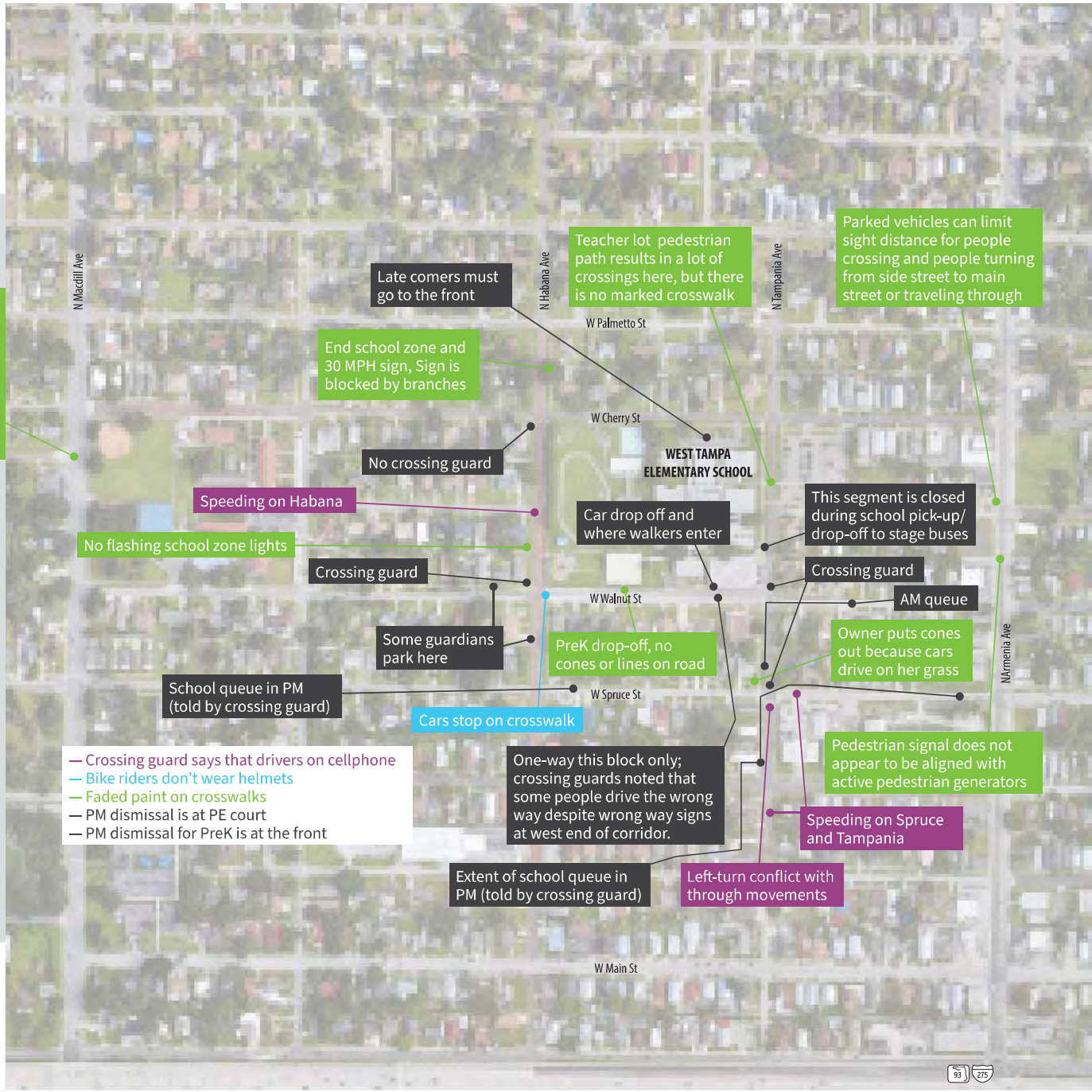
Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- 429 students (95% minority population)
- 2 school buses
- ADT on Habana Avenue is about 9,300 vehicles/day on average over the past 5 years
- ADT on Armenia Avenue is about 8,100 vehicles/day on average over the past 5 years
- ADT on Main Street is about 2,500 vehicles/day on average over the past 5 years



West Tampa Elementary School
West Cherry Street
Tampa, Florida

Figure 12

Hillsborough TPO Transportation Planning Organization

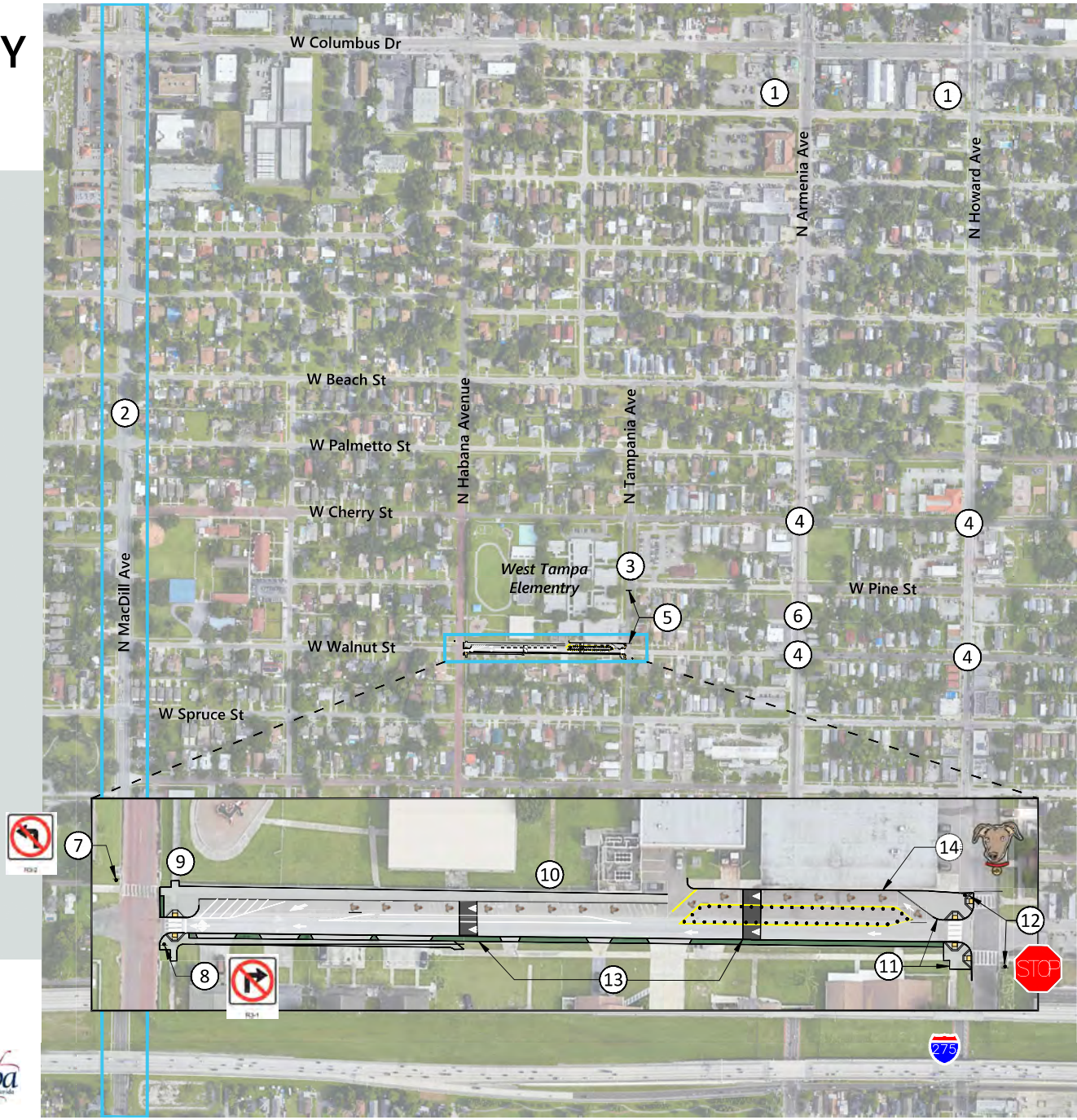
City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

N

1. Implement improvements on Armenia Avenue and Howard Avenue as identified in the West Tampa Multi Modal Plan, which generally include adding bicycle facilities, narrowing travel lanes, eliminating excess turning capacity to shorten pedestrian crossing distances, widening the sidewalk, and constructing curb extensions. While all on-street parking is generally expected to be maintained, parking restrictions may need to be implemented to provide adequate sight-distance.
2. Evaluate Macdill Avenue for lane repurposing and evaluate providing additional marked and controlled crossing locations connecting from neighborhoods to the schools.
3. Add marked crosswalk connecting teacher parking lot to the school.
4. Upgrade curb ramps for ADA compliance and install marked crosswalks and other appropriate crossing treatments.
5. Formalize process to close one block portion of Tampania Avenue during morning drop-up and afternoon pick-up. See report for additional details.
6. Evaluate location of pedestrian crossing in conjunction with other planned improvements on Armenia Avenue. If crossing is to remain, provide ADA compliant curb ramps and advanced stop bar.
7. Install No Left Turn sign (R3-2).
8. Install No Right Turn Sign (R3-1).
9. Extend curb to narrow to one lane to further reinforce the one-way designation.
10. Update striping to reduce vehicle conflicts. Move the southern edge of pavement 3.5 feet north to align with the curb extensions on the east and west side of the corridor. Extend sidewalk on the south side to connect to N Habana Street.
11. Install curb extensions. In the near-term, the curb extension can be created using striping and posts. In the long-tern, consider raised curbs.
12. Convert W Walnut Street and N Tampania Avenue to All-Way Stop.
13. Install speed humps or consider using portable speed bumps.
14. Incorporate school logo into car line.



West Tampa Elementary School
West Cherry Street
Tampa, Florida

Figure 13

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

Planning level cost estimates were developed by PGA for the specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in Appendix E, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop reasonable cost estimates.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. There are existing plans to make safety improvements on N Armenia Avenue and N Howard Avenue. Implement these improvements as identified in the West Tampa Multi Modal Plan, which generally include adding bicycle facilities, narrowing travel lanes, eliminating excess turning capacity to shorten pedestrian crossing distances, widening the sidewalk, and constructing curb extensions. While all on-street parking is generally expected to be maintained, parking restrictions may need to be implemented to provide adequate sight-distance. (Planning Level Cost = $$$$)
2. Evaluate MacDill Avenue for lane repurposing and evaluate providing additional marked and controlled crossing locations connecting from neighborhoods to the schools. (Planning Level Cost = $$$$)
3. There are marked crosswalks in the teacher parking lot directing users to cross N Tampania Avenue where there is not a crosswalk or curb ramps (Image 26). Add a marked crosswalk and curb ramps connecting the teacher parking lot to the school. (Planning Level Cost = $)

Image 34: Crossing from Teacher Parking Lot

4. There are few marked crossings or ADA compliant curb ramps crossing N Armenia Avenue and N Howard Avenue (Image 33). Upgrade curb ramps for ADA compliance and install marked crosswalks and other appropriate crossing treatments where N Armenia Avenue and N Howard Avenue intersect with W Cherry Street and W Walnut Street. (Planning Level Cost = $$$$)

Image 35: Intersection of W Walnut St and N Armenia Ave

5. The closure of N Tampania from W Pine Street to W Walnut Street to vehicle traffic during select school hours, known as school streets, is effective, but the operation has not been coordinated with the City. It is recommended that the process to close this one block portion of Tampania Avenue during morning drop-up and afternoon pick-up be formalized. This process would entail preparing formal maintenance of traffic plans that have been approved by the City Engineer and ensure that staff have been trained in the process to appropriately implement the plan each day. (Planning Level Cost = $)
6. The pedestrian hybrid beacon on N Armenia Avenue south of W Pine Street does not appear to be aligned with pedestrian desire lines. Evaluate the location of the pedestrian crossing in conjunction with other planned improvements on N Armenia Avenue. If the crossing is to remain, provide ADA compliant curb ramps and advanced stop bars. (Planning Level Cost = $$$)
7. During the field visit, crossing guards noted that drivers occasionally go the wrong way down the one-way section of W Walnut Street. The west end of the one-way segment is signed with Do Not Enter (R5-1) and One-Way (R6-1) signs. Install a No Left Turn sign (R3-2) in the southbound direction on N Habana Street to emphasize the turning restriction. (Planning Level Cost = $)
8. In conjunction with Recommendation 7, install a No Right Turn Sign (R3-1) in the northbound direction on N Habana Avenue to provide additional warning about the turning restriction. (Planning Level Cost = $)
9. In addition to Recommendation 7 and 8, extend the curb on the east leg of the W Walnut Street and N Habana Avenue intersection to narrow the cross-section to one lane. This would further reinforce the one-way designation and shorten the crossing distance for pedestrians. (Planning Level Cost = $$)

10. The pavement width on W Walnut Street between N Habana Avenue and N Tampania Avenue is very wide and the striping does not clearly delineate where school traffic and through traffic should travel. Additionally, there are conflicts between through traffic and parents and guardians trying to merge back into the through lane. Update the striping on this segment to clearly separate school traffic from through traffic and reduce vehicle conflicts. The sidewalk in front of the PE court where students are picked up in the afternoon could be widened to provide additional space for students being picked up. Move the edge of pavement approximately three and a half feet north to align with the curb extensions at N Habana Avenue (Recommendation 9) and N Tampania Avenue (Recommendation 11). The extension can be made with paint in the near term and pavement and landscaping in the long term. (Planning Level Cost = $$$)
11. The east end of the one-way segment of W Walnut Street does not clearly distinguish between where school traffic and through traffic should travel. Because there is not a curb on the northwest corner of the intersection, there is also not a clear separation between vehicles and pedestrians (Image 34). Install curb extensions on the west leg of the intersection to reduce the potential conflicts between vehicles and vehicles and pedestrians. In the near term, the curb extensions can be created using striping and posts. Longer term, consider installing raised curbs. Recommendations 10 and 11 could incorporate the school logo as a painted element along W Walnut Street to further reinforce that the street is primarily uses for school drop-off/pick-up and not high-speed through travel (see recommendation 14). (Planning Level Cost = $$)

Image 36: Intersection of W Walnut St and N Tampania Ave

12. The queue for the car line spills onto W Walnut Street and N Tampania Avenue. Generally, cars in the queue on these two streets take turns entering the car line. However, because the intersection of W Walnut Street and N Tampania Avenue is side-street stop-controlled, with the stop sign on westbound W Walnut Street, northbound school traffic has the official right of way, which can create confusion. Converting this intersection to an All-Way Stop would

provide clear direction for school traffic and better allocate the right-of-way outside of school hours. (Planning Level Cost = $)

13. Add speed humps on W Walnut Street between N Habana Avenue and N Tampania Avenue to slow traffic on the segment. The City could pilot the use of portable speed bumps, as described in Chapter 3, to determine the most effective locations; as this school uses slightly different drop-off and pick-up procedures. Use of the portable speed bumps would allow for a time-of-day speed bump plan to be developed. The portable speed bumps would need to be set up before and removed after school hours. (Planning Level Cost = $)
14. Incorporate the school logo into the car line striping plan to enforce where school traffic should travel (see also recommendations 10 and 11). (Planning Level Cost = $$)

7. Orange Grove Middle Magnet

Orange Grove Middle Magnet School is located on 16th Street and had a 2021/2022 enrollment of approximately 480 students. The school attracts students from the region, with a concentration of students around the school, as shown on Image 35. The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school.

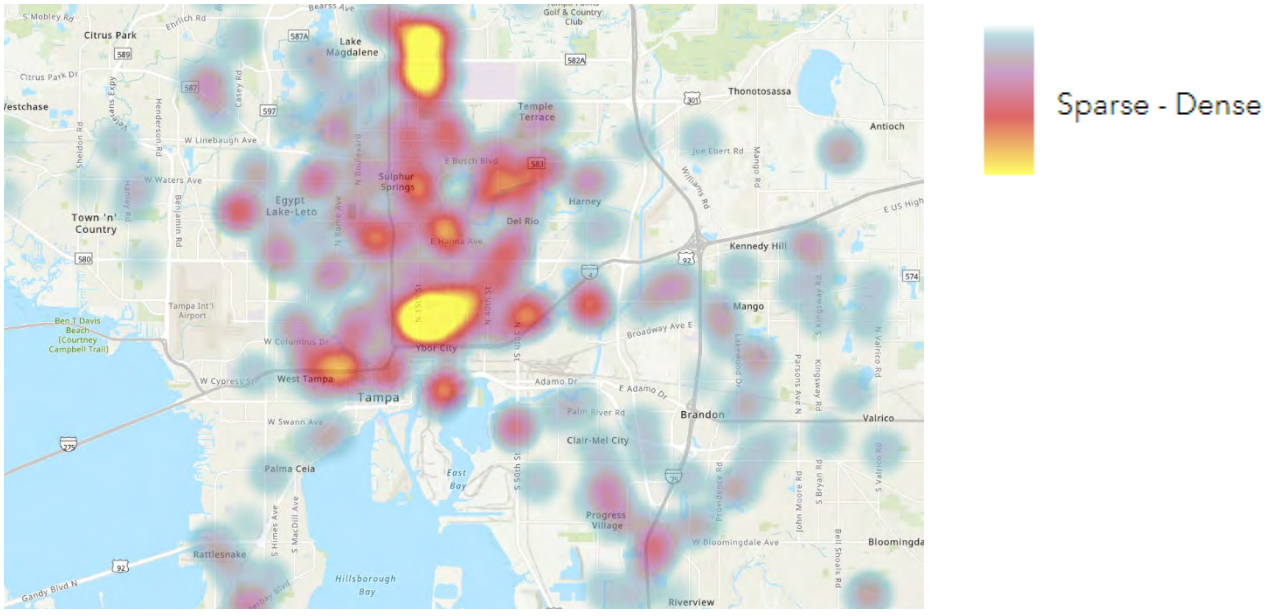


Image 37: Orange Grove Middle Magnet Student Residential Locations

Surrounding Land Use and Transportation System Context

Orange Grove Middle Magnet is located in a residential neighborhood. Land uses within the enrollment boundary area primarily consist of multi-family and single-family residential uses with commercial uses along E Dr Martin Luther King Jr Boulevard, N Nebraska Avenue, N 15th Street, and N 22nd Street. There are several other schools in the area, including a magnet elementary school and magnet middle school two blocks north of Orange Grove. These schools would also benefit from the improvements recommended in this study. Potter Elementary is also located within the Orange Grove Magnet Middle enrollment boundary and improvements identified around that school would also benefit students at Orange Grove.

E Dr Martin Luther King Jr Boulevard is located north of Orange Grove. The land uses fronting the roadway are primarily a mixture of residential, commercial, and institutional. There are a relatively high number of driveways on the north side of the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. A school and a cemetery front the south side of the road and there are longer stretches of sidewalk that do not have driveway conflicts. The intersections on the road are signalized or side street stop controlled. The signalized intersections have marked crosswalks with pedestrian signals. There is also a marked crosswalk with an RRFB at the intersection of N 19th Street, connecting Robert L. Cole Sr. Community Lake to Young Middle Magnet School. The Florida Department of Transportation (FDOT) has funded a Complete Streets Study of E Dr Martin Luther King Jr Boulevard.

Key characteristics of Dr Martin Luther King Jr Boulevard include:

- East-West Arterial
- 50-foot to 77-foot typical cross section
- Four vehicular travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the road
- Transit access (HART Route 32)
- 22,400 vehicles per day on average

N Nebraska Avenue is west of the Orange Grove campus. The land use adjacent to the roadway is largely commercial. The intersections on the road are signalized or side street stop controlled. The signalized intersections have marked crosswalks with pedestrian signals. There is also a marked crosswalk with advance yield markings and a pedestrian refuge island at the intersection of E 25th Avenue.

Key characteristics of N Nebraska Avenue include:

- North-South Arterial
- 42-foot typical cross section

- One travel lane in each direction, with a center two-lane left-turn or painted median, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 35 miles per hour
- 4-foot to 5-foot bike lanes
- 5-foot sidewalks on both sides of the road
- Transit access (HART Route 400)
- 14,200 vehicles per day on average

N Avenida Republica de Cuba is one-way southbound and forms a couplet with N 15th Street. The land uses fronting the street are predominantly residential. While many residences are accessed off N Avenida Republica de Cuba, some are accessed from the side streets, reducing the potential for conflict between vehicles and bicycles and pedestrians. The intersections along the corridor are signalized or side-street stop-controlled. There are marked crosswalks with pedestrian signals at the signalized intersections. There are also uncontrolled marked crosswalks at the intersections of E Lake Avenue and E 18th Avenue.

Key characteristics of N Avenida Republica de Cuba include:

- North-South Collector
- 37-foot typical cross section
- Two travel lanes in each direction
- On-street parking on west side of the street
- Posted speed limit of 30 miles per hour
- 6-foot bike lane between E Lake Avenue and E 26th Avenue
- 4-foot sidewalks on both sides of the road
- Transit access (HART Route 9)
- 3,000 vehicles per day on average

N 15th Street is one-way northbound south of E Lake Avenue and forms a couplet with N Avenida Republica de Cuba. The land uses along the road are a mix of residential and commercial. There are a relatively high number of driveways on the north side of the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. The intersections along the corridor are signalized or side-street stop-controlled. There are marked crosswalks with pedestrian signals at the signalized intersections. There are also marked crosswalks at the intersection of E 26th Avenue. The City of Tampa is also working on a 15th Street Corridor Study.

Key characteristics of N 15th Street include:

- North-South Collector
- 36-foot typical cross section
- Two travel lanes in each direction
- On-street parking on west side of the street
- Posted speed limit of 30 miles per hour

- No bicycle facilities
- 4-foot to 5-foot sidewalks on both sides of the road
- Transit access (HART Route 9)
- 4,500 vehicles per day on average

E Lake Avenue is north of the Orange Grove campus. There is a mix of residential and commercial land uses fronting the roadway. The density of driveways varies along the corridor, with a high number in some areas, and a relatively few in other areas. The intersections on the road within the vicinity of the school are signalized or side street stop controlled, except the intersection of N 26th Street, which is all-way stop-controlled. The signalized intersections have marked crosswalks with pedestrian signals. There are several uncontrolled marked crossings of E Lake Avenue including at N 12th Street, Devon Street, N Avenida Republica de Cuba, N 17th Street, N 19th Street, and Machado Street. The intersections of E Lake Avenue with N 17th Street and N 19th Street have marked crosswalks, with the intersection of N 17th Street planned to be converted to an all-way stop-control intersection.

Key characteristics of E Lake Avenue include:

- East-West Collector
- 25-foot to 37-foot typical cross section
- One travel lane in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 30 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the road
- 1,900 vehicles per day on average

School Circulation

The general arrival/dismissal operations for Orange Grove Middle Magnet School are shown in **Figure 14**. The car line is located on the east side of the building. The entrance is located on N 18th Street and the exit is on E 26th Avenue. The car line has about 550 feet of on-site storage. The queue during the afternoon pick-up extends past the available storage. The queue forms southbound on N 18th Street almost to E Lake Avenue and eastbound on E 28th Avenue (Image 36 and Image 37). The buses and some students also exit the school on E 28th Avenue, resulting in conflicts between cars, buses, and pedestrians on E 28th Avenue (Image 38). Other students are released on N 16th Street.

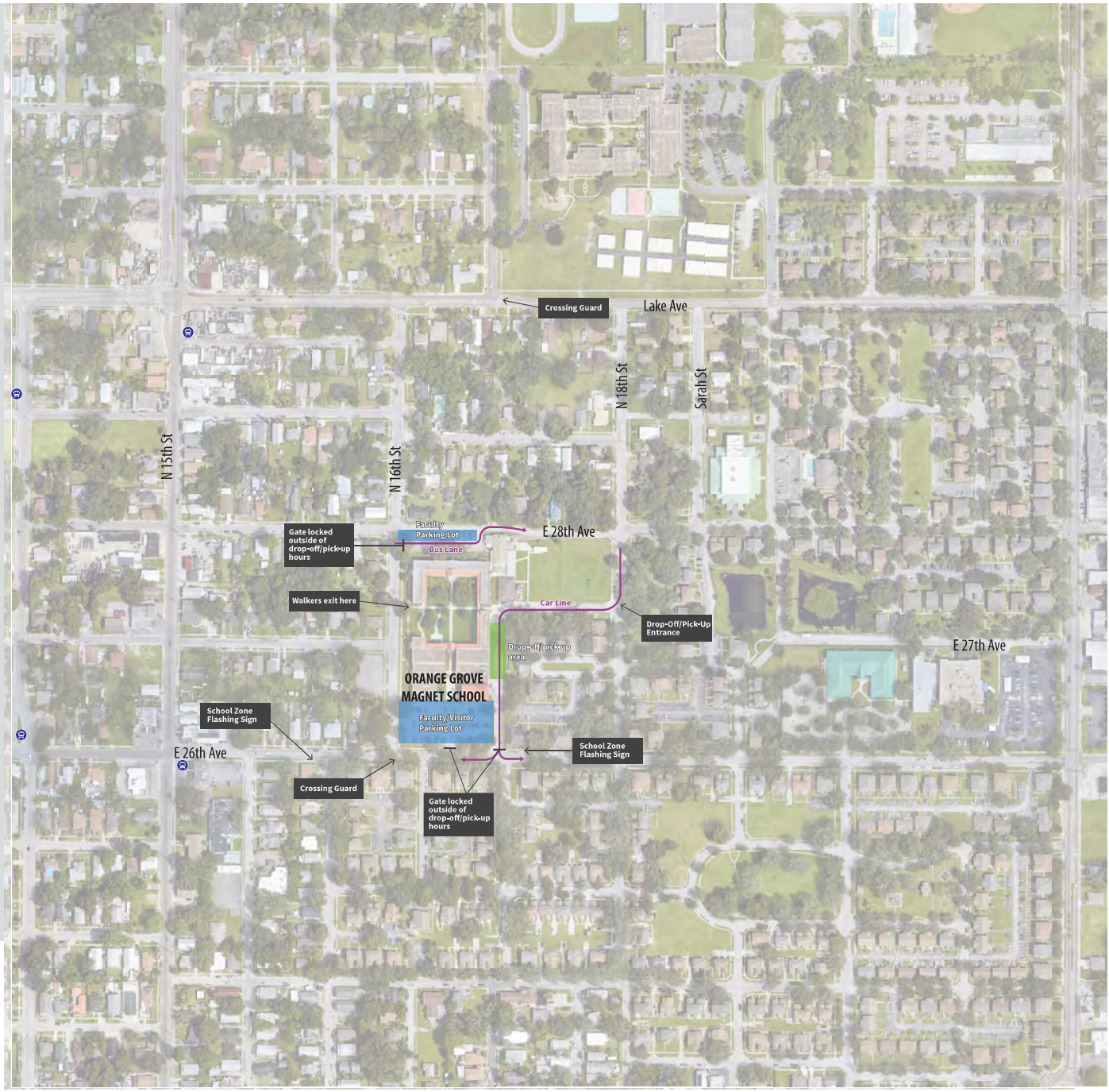
Image 38: Afternoon Car Line on E 28th Avenue

Image 39: Afternoon Car Line on N 18th Street

Image 40: Car Line, Pedestrians, and Buses Mixing on E 28th Avenue

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study



Orange Grove Magnet
North 16th Street
Tampa, Florida

Figure 14

Hillsborough TPO Transportation Planning Organization

City of Tampa

Field Observations

Field Observations were conducted on April 28, 2022, during both arrival and dismissal. Observations from the visit are shown on **Figure 15**. These observations are organized to note where there is incomplete infrastructure, parents/guardians were observed not to follow the school identified circulation strategy or the Florida Vehicle Code, and people were observed to drive in excess of the posted speed limit. Informational items, such as the location of a crossing guard, are also provided. This section describes some of the key observations from the field visit around Orange Grove Middle School.

The car line in the afternoon forms on southbound N 18th Street and eastbound E 28th Avenue. At the intersection of N 18th Street at E 28th Avenue, drivers generally alternate turns; however, because southbound N 18th Avenue does not have a stop sign, some drivers do not let cars on E 28th Avenue in the line. There are also conflicts between through traffic and school traffic at the intersection (Image 39). Students who go to the Boys & Girls Club, located about 350 feet east of the school, are released on the north side of the school and cross at this intersection (Image 40), where there are no marked crosswalks.

Image 41: Conflict Between Through Traffic and School Traffic at N 18th Street and N 28th Avenue

Image 42: Students Crossing N 18th Street at E 28th Avenue

Neighbors and crossing guards noted that drivers speed on E 26th Avenue and N 18th Street. The posted speed limit is 25 miles per hour on both roadways and 15 miles per hour on E 26th Avenue during school arrival and dismissal. Speed data shows that the 85th percentile speed on E 26th Avenue and N 18th Street is around 31 miles per hour and 30 miles per hour, respectively.

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

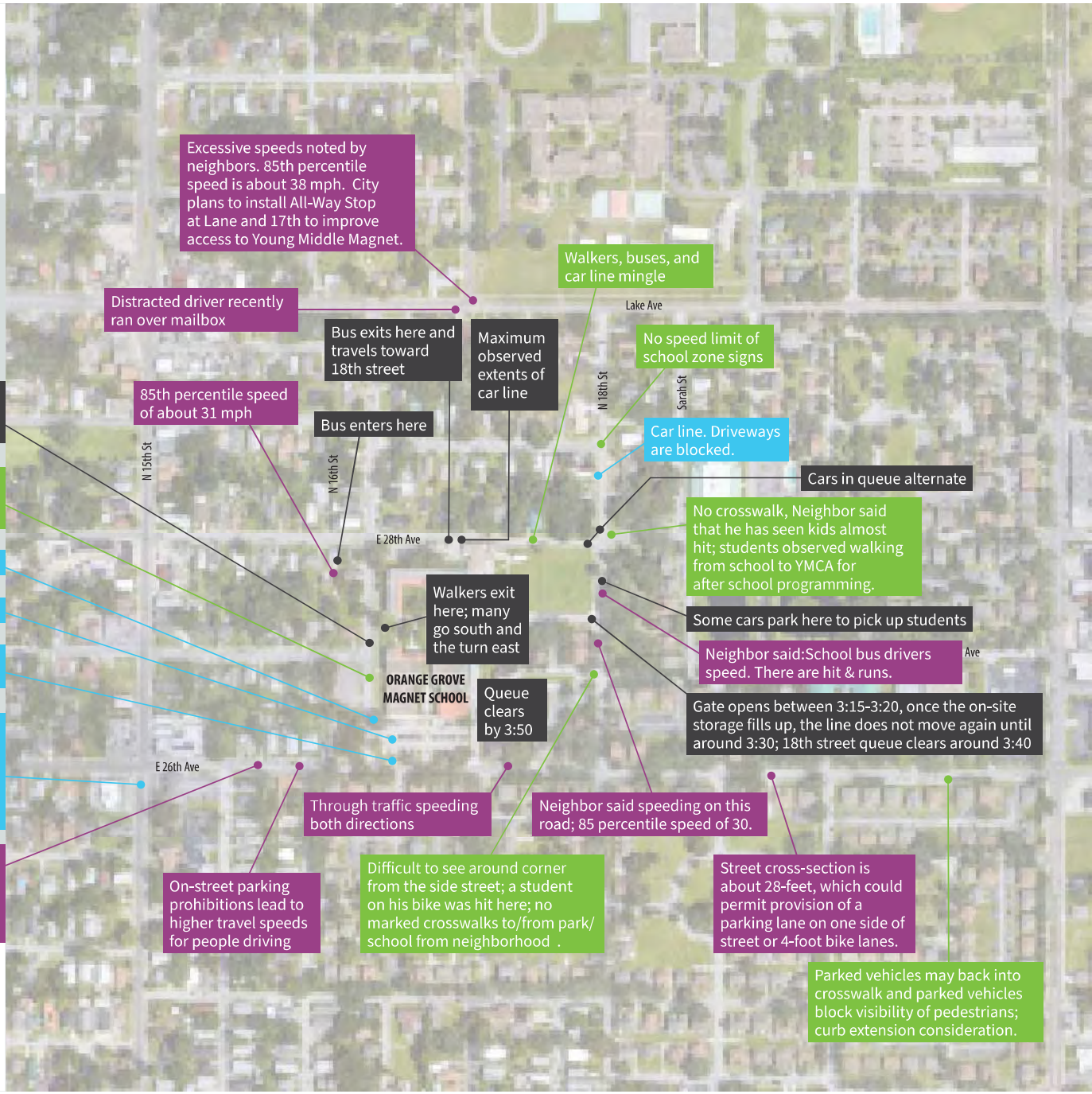
Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- 484 students (86% minority population)
- ADT on 15th Street is about 4,500 vehicles/day on average over the past 5 years
- ADT on Lake Avenue is about 1,900 vehicles/day on average over the past 5 years
- ADT on 22nd Street is about 9,400 vehicles/day on average over the past 5 years



Orange Grove Magnet
North 16th Street
Tampa, Florida

Figure 15

Hillsborough TPO Transportation Planning Organization

City of Tampa

Engineering Recommendations

The existing conditions and preliminary roadway modification ideas were presented to project stakeholders, including the school principal, for discussion and feedback. Those initial ideas and subsequent conversations were used to identify a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the Orange Grove Middle School campus, slow the speeds of people driving, and refine the school circulation to reduce conflicts. The refined recommendations were shared with project stakeholders as well as school staff for their review and feedback, with the resulting projects shown on **Figure 16**, with the numbers below corresponding to the numbers on the figure.

Planning level cost estimates were developed by PGA for the specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in Appendix E, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop reasonable cost estimates.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. Students who go to the Boys & Girls Club after school are released on the north side of the school and walk east on E 28th Avenue. There are no sidewalks between the school and N 18th Street (Image 35). Add a sidewalk for walkers exiting the school from the north. (Planning Level Cost = $)

Image 43: E 28th Avenue Where Students are Released

2. There are no marked crosswalks at the intersection of E 28th Avenue and N 18th Street, although students cross here. Additionally, neighbors and speed data indicate that there is some speeding on N 18th Street, with the 85th percentile speed around 30 miles per hour. Install marked crosswalks and an All-Way stop at the intersection to enhance pedestrian safety and better allocate the right-of-way between roadway users at the intersection. (Planning Level Cost = $)
3. The intersection of E Lake Avenue and N 17th Street is used by students at Orange Grove Middle, Lockhart Elementary, and Young Middle. Install an All-Way Stop to better allocate the right-of-way between roadway users and a raised crosswalk or other traffic calming device on the east leg of the intersection. (Planning Level Cost = $)
4. The County has already identified potential improvements on N 15th Street and N Avenida Republica de Cuba as part of its City of Tampa Walk-Bike Plan Phase II. Speed data shows the 85th percentile speed on the N 15th Street is 40 miles per hour on weekdays; the posted speed limit is 10 miles per hour. Implement existing Complete Streets Improvements, which include walking and bicycling infrastructure, lane narrowing, and more frequent marked crosswalks. (Planning Level Cost = $$$)
5. At the intersection of N 16th Street and E 28th Avenue, remove the Pedestrian Crosswalk sign and install an All-Way Stop to better allocate right-of-way between roadway users. (Planning Level Cost = $)
6. N 16th Street has a cross-section of 28 feet. To encourage drivers to slow down on the roadway, consider allowing parking on one side of the roadway. (Planning Level Cost = $)
7. Existing signage does not direct parents and guardians to the car line. There is a sign on the gate to the teacher's parking lot on E 26th Avenue stating that pick-up/drop-off is located on 16th Street. Additionally, the entrance to the car line is signed as bus only. Update signage directing parents/guardians to the correct pick-up/drop-off location. (Planning Level Cost = $)

8. To better allocate the right-of-way between roadway users, convert the intersections of 16th Street and 18th Street with 26th Avenue to all-way stop-control. Add a marked crosswalk across 26th Avenue at 18th Street. (Planning Level Cost = $)
9. Residents and speed data indicate that some drivers on N 18th Street drive over the speed limit. Install marked crosswalks on all legs and raised crosswalks on the north and south legs to slow traffic on N 18th Street and provide enhanced safety for people walking and biking. (Planning Level Cost = $)
10. As previously described, some drivers speed on E 26th Avenue, even in the school zone. E 26th Avenue has a typical cross-section of 28 feet and parking is prohibited on most portions of the corridor (Image 42). To help reduce speed and provide a dedicated bicycle facility, narrow travel lanes to 10 feet and add four-foot bike lanes along the length of the roadway. (Planning Level Cost = $ if only restriping; $$$$ if resurfacing is required)

Image 44: E 26th Avenue Cross-section

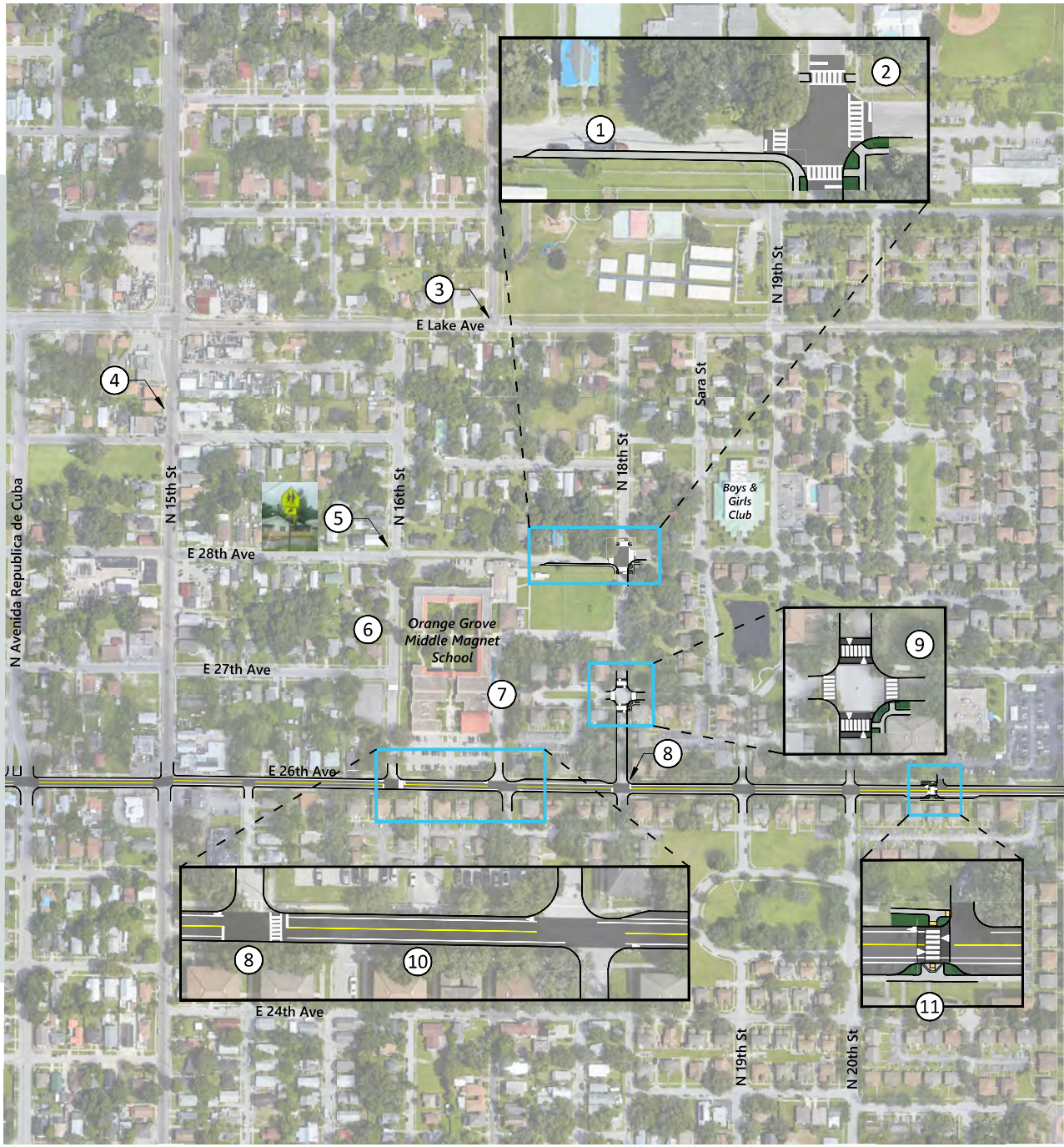
11. There is a neighborhood services center about a quarter of a mile east of the school. There is a marked crosswalk connecting the apartments on the south side of the street to the service center. Parking is allowed on the south side of the road. To slow traffic on the corridor, shorten the crossing distance for pedestrians, and prevent cars from blocking the crosswalk, add a curb extension and install a raised crosswalk. (Planning Level Cost = $)
12. There are several school speed zone signs around the middle school. It is recommended to bring the existing School Speed Zones into compliance with the latest State Statue including adding flashers on higher speed roadways. (Planning Level Cost = $$$ - if existing equipment can be repurposed or upgrades involve only signage, cost would be lower.)

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

N

1. Add sidewalk for walkers exiting the school from the north
2. Install marked crosswalks and an All-Way stop.
3. Install All-Way Stop. Additionally, install a raised crosswalk on the east leg of the intersection or other traffic calming device.
4. Implement existing Complete Streets Improvements, which include walking and bicycling infrastructure, lane narrowing, and more frequent marked crosswalks.
5. Remove Pedestrian Crossing sign and install All-Way Stop.
6. Allow parking on one side of the roadway.
7. Update signage directing parents/guardians to the correct pick-up/drop-off location. The entrance to the car line is signed as Bus Only and there are signs on 26th Avenue directing drivers to 16th Street.
8. Install All-Way Stop.
9. Install marked crosswalks on all legs and raised crosswalks on the north and south legs.
10. Narrow travel lanes to 10 feet and add four-foot bike lanes.
11. Add a curb extension to reduce pedestrian crossing distance and install a raised crosswalk.
12. Bring existing School Speed Zone into compliance with State Statute and install flashers.



Orange Grove Magnet Middle School
16th Street
Tampa, Florida

Figure 16

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

8. Jefferson High School

Jefferson High School is located on West Cypress Street. The high school had a 2021/2022 school year enrollment of about 1,350 students. Jefferson has a large enrollment boundary that is divided by the Tampa airport. Some students live within walking distance in the neighborhood on the east edge of the high school. More students live within biking distance, within a three-mile radius of Jefferson. However, there are some significant barriers to biking, including N Dale Mabry Highway. I-275 runs along the southern edge of the school, leaving few walking or biking routes for students who live south of the school. Students who live in the northwest corner of the enrollment boundary do not have a route to bike to school. The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school.

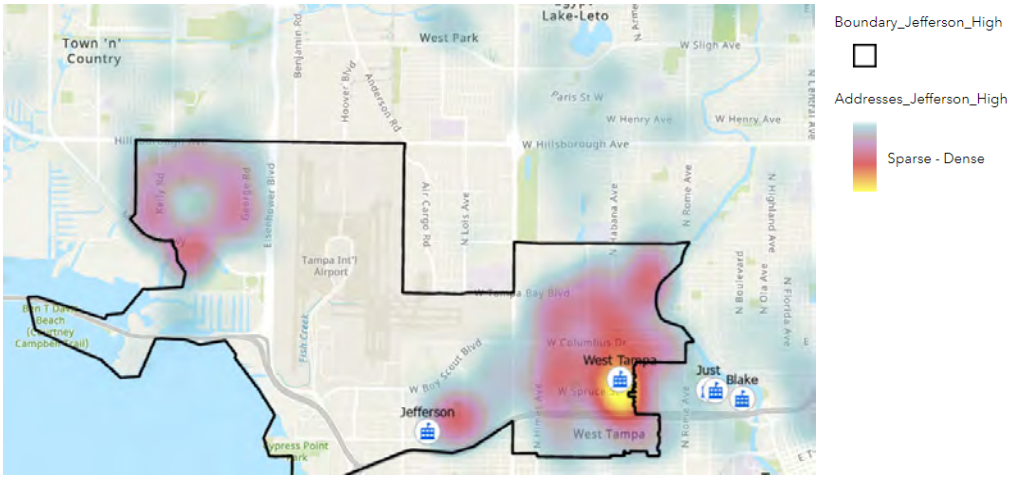


Image 45: Jefferson High School Enrollment Boundary

Surrounding Land Use and Transportation System Context

Jefferson High School lies between a large commercial area to the west and a residential area to the east. Despite the heavy commercial uses in the area, there are two large apartment complexes north of the school and a residential neighborhood to the east from which students could walk to school. There are several major roads in the area including W Cypress Street, W Spruce Street/W Boy Scout Boulevard, N Westshore Boulevard, N Lois Ave, and N Dale Mabry Highway.

W Cypress Street, which forms the southern boundary of the school campus, is primarily lined with commercial land uses. Many of the developments are large and have only one or two driveways or driveways that access the side streets, resulting in fewer driveway conflicts for people walking and biking on the sidewalks. The intersections are either side-street stop-controlled or signalized. The signalized intersections have marked crosswalks and pedestrian signals. There is a mid-block crossing with advance stop bars and a RRFBs about 350 feet west of N Grady Avenue that is part of a bike trail that connects N Church Avenue to N Lois Avenue south of I-275.

Key characteristics of W Cypress Street include:

- East-West Collector
- 50-foot to 67-foot typical cross section
- Access control with a landscaped median along the school frontage
- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities
- 5-foot sidewalks on the south side of the roadway, 5-foot to 10-foot sidewalks on the north side
- Transit access (HART Route 10 and 45)
- An average of 16,600 vehicle trips per day along the roadway

W Spruce Street/W Boy Scout Boulevard (W Spruce Street), located to the north of the school, is predominantly fronted by commercial land uses. Spruce Street also serves as the southern boundary of the Tampa International Airport and the International Plaza. In the area, the driveways on the north side of the roadway all connect to side streets. The developments on the south side of the roadway generally have consolidated driveways, so there are relatively few driveways conflicting with the sidewalk on the south side of the roadway. The intersections are either side-street stop-controlled or signalized. The signalized intersections have marked crosswalks and pedestrian signals. There are no other marked crossings on this segment of W Spruce Street.

Key characteristics of W Spruce Street include:

- East-West Arterial
- 130-foot typical cross section,

- Three vehicle travel lanes in each direction, plus a landscape median and turn lanes at intersections
- No on-street parking
- Posted speed limit of 50 miles per hour
- 5-foot bike lanes on the majority of the corridor
- 6-foot sidewalks on both sides of the roadway
- Transit access (HART Route 10 and 32)
- An average of 40,600 vehicle trips per day along the roadway

N Westshore Boulevard, located one block west of the school, is predominantly fronted by commercial land uses. Many of the businesses on the corridor are accessed via N Westshore Boulevard, but the developments are mid-rise office buildings and have only one or two driveways, resulting in fewer driveway conflicts for people walking and biking on the sidewalks. The buildings are surrounded by parking lots, which creates a less comfortable feel for people walking and biking and generally increases temperatures. There are 5-foot sidewalks on both sides. The sidewalk on the east side of the road has a 12-foot landscape barrier along much of the segment, but the sidewalk on the west side is typically directly adjacent to the road. The intersections are either side-street stop-controlled or signalized. The signalized intersections have marked crosswalks and pedestrian signals.

Key characteristics of N Westshore Boulevard include:

- North-South Arterial
- 68-foot typical cross section,
- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 45 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the roadway
- Transit access (HART Route 10 and 15)
- An average of 24,960 vehicle trips per day along the roadway

N Lois Avenue, located to the east of the campus, is fronted by commercial land uses, including several hotels, with the southern section largely lined by residential land uses including single-family and multi-family residences. There are relatively few driveway conflicts, as many of the driveways are on the side streets. The intersections are either side-street stop-controlled or signalized. The signalized intersections have marked crosswalks and pedestrian signals. Additionally, there is a marked crosswalk at the intersection of N Lois Avenue and W Laurel Street. The crosswalk has pedestrian crossing signs, but no other enhanced crossing treatments.

Key characteristics of N Lois include:

- North-South Collector
- 50-foot typical cross section,

- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 35 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the roadway
- Transit access (HART Route 45)
- An average of 10,400 vehicle trips per day along the roadway

N Dale Mabry Highway is the western limit of the enrollment boundary. It is a major north-south arterial that provides access to the Hillsborough Community College Dale Mabry Campus and the Tampa Bay Buccaneers Stadium. The corridor has signalized and side-street stop-controlled intersections. Side-street movements are generally restricted to right-in, right-out, left-in. Access to driveways on the roadway are restricted to right-in, right-out. Sidewalks on both sides of the road have an approximately 30-foot landscape buffer. Most driveways have marked crosswalks alerting drivers to the potential presence of people walking and biking.

Key characteristics of W Dale Mabry Highway include:

- North-South Arterial
- 95-foot typical cross section,
- Two vehicle travel lanes in each direction, plus turn lanes at intersections
- No on-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities
- 5-foot sidewalks on both sides of the roadway
- Transit access (HART Route 15)
- An average of 59,800 vehicle trips per day along the roadway

The Westshore Alliance prepared a Master Plan for the Westshore District that identifies transportation system improvements in the area, including signalization of intersections, construction of sidewalks, and other streetscape improvements that are intended to increase comfort for people walking and biking in the area. Additional information can be found here: https://www.choosewestshore.com/master-plan/.

School Circulation

Figure 17 displays the typical arrival/dismissal operations for Jefferson High School. There are sidewalks on-site that connect the school to the sidewalks on N Trask Street, but the entrances were gated and locked when the project team was observing operations. The car line is in the student parking lot on the west side of the building. There are two aisles that parents and guardians can use, the first is for parents who exit to the south on N Trask Street, the other is for parents who exit to the north on N Trask Street. The lot in front of the school is for visitors and school buses. Because of the high traffic volumes on W Cypress Street, it is difficult for buses to turn left out of the school. Additionally, the bushes in the landscaped median make it challenging for bus drivers to see if there is traffic in the eastbound direction. The lead bus driver will often block traffic so that the remaining buses can exit the school.

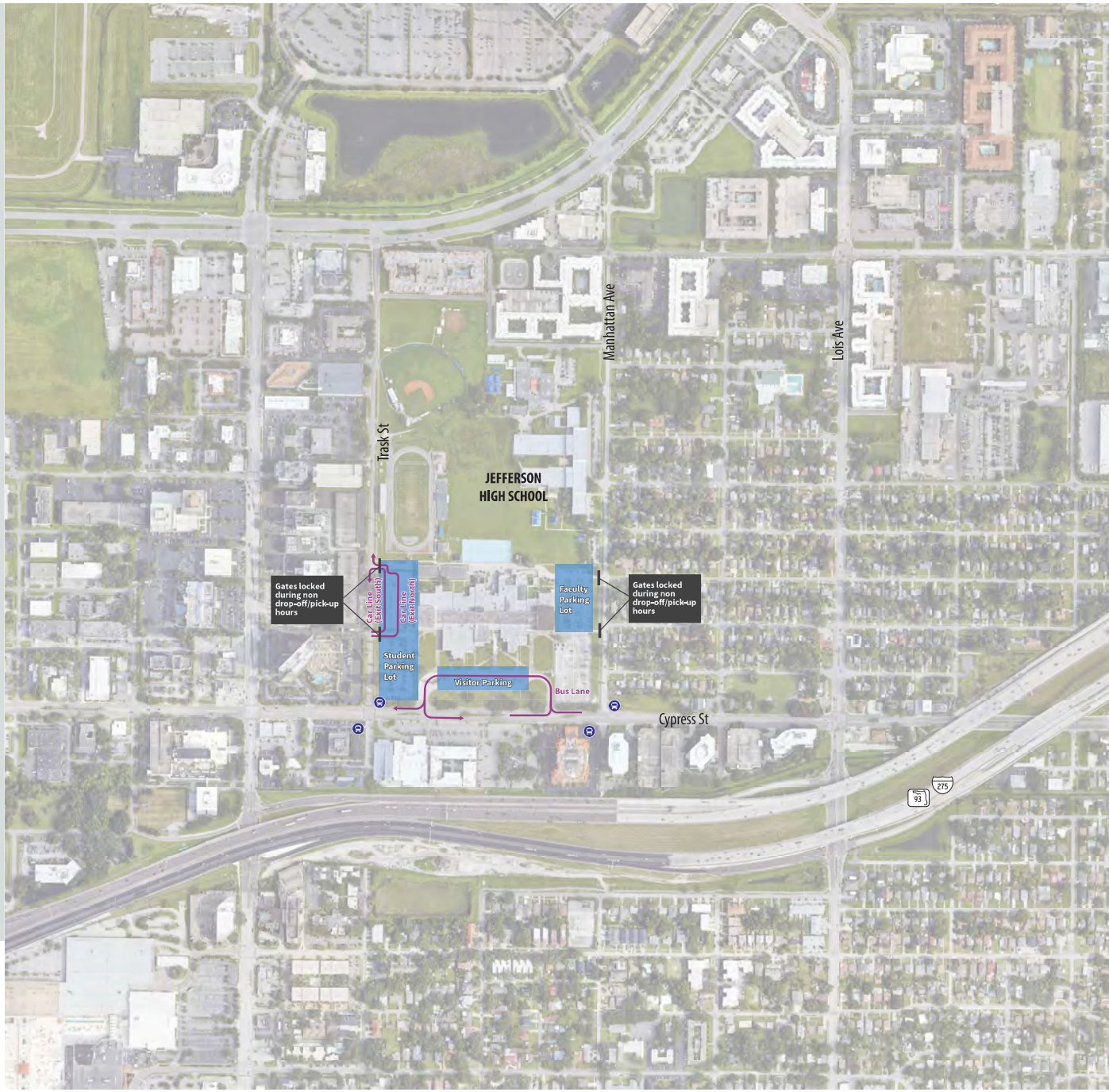
Nine bus routes serve the school in the morning and eight bus routes serve the school in the afternoon. The earliest a student gets picked up by the school bus in the morning is around 7:30 AM, which is about an hour before school starts. The latest a student gets dropped off from the school bus in the afternoon is around 5:00 PM, which is an hour and a half after school dismisses. Some students take HART buses to/ from school.

Image 46: View From Bus Exit - Looking West on W Cypress Street

Image 47: Two Car Lanes for Car Line, Divided by Traffic Cones

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study



Jefferson High School
West Cypress Street
Tampa, Florida

Figure 17

Hillsborough TPO Transportation Planning Organization

City of Tampa

Field Observations

Field Observations were conducted on May 4, 2022, during the morning arrival. Observations from the visit are shown in **Figure 18**. These observations are organized to note where there is incomplete infrastructure, parents/guardians were observed not to follow the school identified circulation strategy or the Florida Vehicle Code, and people were observed to drive in excess of the posted speed limit. Informational items, such as the location of crossing guards, is also noted. This section describes some of the key observations from the field visit.

School staff reported that some students park at the hotel across the street from the high school and cross W Cypress Street mid-block where there is not a marked crossing (Image 46). There are several potential reasons a student might park in the hotel lot. Only seniors are eligible for parking passes, so students in other grade levels that are driving age may choose to park here. In addition, the gates to the student lot are locked outside of school arrival and dismissal. If a student needs to leave school early, they must ask a resource officer to unlock the gate. A student that does not want to do this may choose to not park in the student lot.

Image 48: Hotel Parking Lot Where Some Students Park

Students were observed crossing N Trask Street at the entrance to the student lot.

Engineering Recommendations

The existing conditions as well as preliminary roadway modification ideas were presented to project stakeholders for discussion and feedback to identify a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the Jefferson High School, slow the speeds of people driving, and refine the school circulation to reduce conflicts. Once refined, the recommendations were shared with project stakeholders as well as school staff for their review and feedback. The resulting projects are shown on **Figure 19**. The numbers below correspond to the numbers on the figure.

The Westshore Alliance developed a Master Plan for the Westshore District that include a variety of potential improvements including adding street trees and public amenities. It is recommended that the Westshore Master Plan be incorporated in addition to the improvements provided below.

Planning level cost estimates were developed by PGA for the specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in Appendix E, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop reasonable cost estimates.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. The northbound left-turn pocket and southbound left-turn pockets at N Trask Street and the student parking lot exit are not used and could be repurposed. The student lot is exit only at this driveway and the entrance to the parking lot on the west leg is fenced off. Add a marked crosswalk and landscape median at the intersection for students who want to access the businesses on the other side of N Trask Street. Consider providing a raised crosswalk. (Planning Level Cost = $)
2. There are sidewalks on-site that connect the school to the sidewalks on N Trask Street, but the entrances are gated and locked during school hours even when students are arriving and leaving. Open the sidewalk gates during student arrival and dismissal. (Operational Strategy)
3. Students were observed crossing N Trask Street to access the business on the west side of the road. Add a marked crosswalk and a sidewalk connection to high school to improve safety for students making this crossing. Consider providing a raised crosswalk. (Planning Level Cost = $)

Image 49: Students Waiting to Cross Trask St at the Student Lot Entrance

4. There is no sidewalk on the west side of N Trask Street. Implement multimodal improvements as identified in the Westshore Master Plan along N Trask Street. (Planning Level Cost = $$$$)
5. During field observations it was noted that the pedestrian push button on the northeast corner of the W Cypress Street and N Trask Street did not work. Fix the pedestrian push buttons and update the intersection to meet current ADA standards. There are also several students who wait for the HART bus at the stop on the northeast corner of the intersection. Provide a bus shelter on the northeast corner to protect students and other users from the sun and rain. (Planning Level Cost = $$$$)

Image 50: Intersection of W Cypress Street and N Trask Street

6. To improve safety for vehicles turning to and from N Manhattan Avenue at both W Cypress Street and W Boy Scout Road, and to provide a protected pedestrian crossing, the City of Tampa and FDOT recently conducted a signal warrant analysis at the intersections and have incorporated signalization of the intersection into the Transportation Improvement Plan (TIP). Implement the TIP improvements. (Planning Level Cost = $$$$)

7. The City of Tampa has a Complete Streets Plan for N Lois Avenue. Some components of the plan include narrowing existing travel lanes to accommodate four-foot bike lanes, widening the sidewalk on the east side of the roadway north of I-275, and adding crosswalks on the side streets. The plan also calls for the installation of marked crosswalks with RRFBs at the intersections of N Lois Avenue at both W Laurel Street and W Gray Street. It is recommended that the Complete Streets Plan be implemented. (Planning Level Cost = $$$$)
8. Several students take the HART bus to school. These students cross the visitor parking lot/bus loop off W Cypress Street to get to school. There are three marked crosswalks in the lot with two of them discontinuous through school bus parking stalls. There also is not a connection from the marked crosswalks to the sidewalk on the north side of W Cypress Street. Install a sidewalk connection from the bus stops on the north side of W Cypress Street to the high school and provide a landscape median to prevent buses or other vehicles from parking in the crosswalk. (Planning Level Cost = $)
9. As mentioned under the School Circulation section, it is very hard for school buses exiting the school to make a left-turn onto W Cypress Street due to insufficient gaps in the vehicle flow. Additionally, there are students who park at the hotel across from the school and cross mid-block to get to/from school. Signalize the school exit on W Cypress Street, add crosswalks to improve safety for school buses exiting the driveway and students crossing the street. The width of the school exit is also very wide, about 108 feet. Tighten the curb radius of the driveway to reduce the crossing distance for pedestrians. (Planning Level Cost = $$$$)

Image 51: Width of Exit of School Loop at W Cypress Street

10. Because the existing HART bus stops are not co-located with a marked crosswalk, consider relocating the existing bus stops on both the north and south sides of W Cypress Street to the new signalized intersection at the bus loop exit (Recommendation 9) to encourage users to cross at the marked crossing. Because the new intersection is about 300 feet away from the existing bus stops at W Cypress Street and N Trask Street, HART may need to evaluate the bus stop locations. (Planning Level Cost = $$$$)

11. There are no school speed zone signs on W Cypress Street to alert drivers they are in a school zone. It is recommended to bring the existing School Speed Zones into compliance with the latest State Statue. The streets around Jefferson High School could also be a candidate for the Yard Sign program noted in Chapter 3. (Planning Level Cost = $$$ - if existing equipment can be repurposed or sign upgrades only, cost would be lower.)
12. Evaluate the potential for a lane repurposing along West Cypress Street to provide protected bicycle facilities or other modifications that provide additional transportation options.
13. The Westshore Alliance has identified several locations as potential painted intersections that could be funded through the Alliance Public Art Committee. The Westshore Alliance should work with the City and School District to incorporate school crossing enhancements the following intersections (cost budgeted by Alliance Public Art Committee):
    a. N Manhattan Avenue at W Main Street
    b. W Cypress Street at N Trask Street
    c. W Cypress Street at N Manhattan Avenue
    d. N Manhattan Avenue at W Spruce Street

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- 1,343 students (91% minority population)
- 20 school buses
- ADT on Cypress Street is about 16,600 vehicles/day on average over the past 5 years

Jefferson High School
West Cypress Street
Tampa, Florida

Figure 18

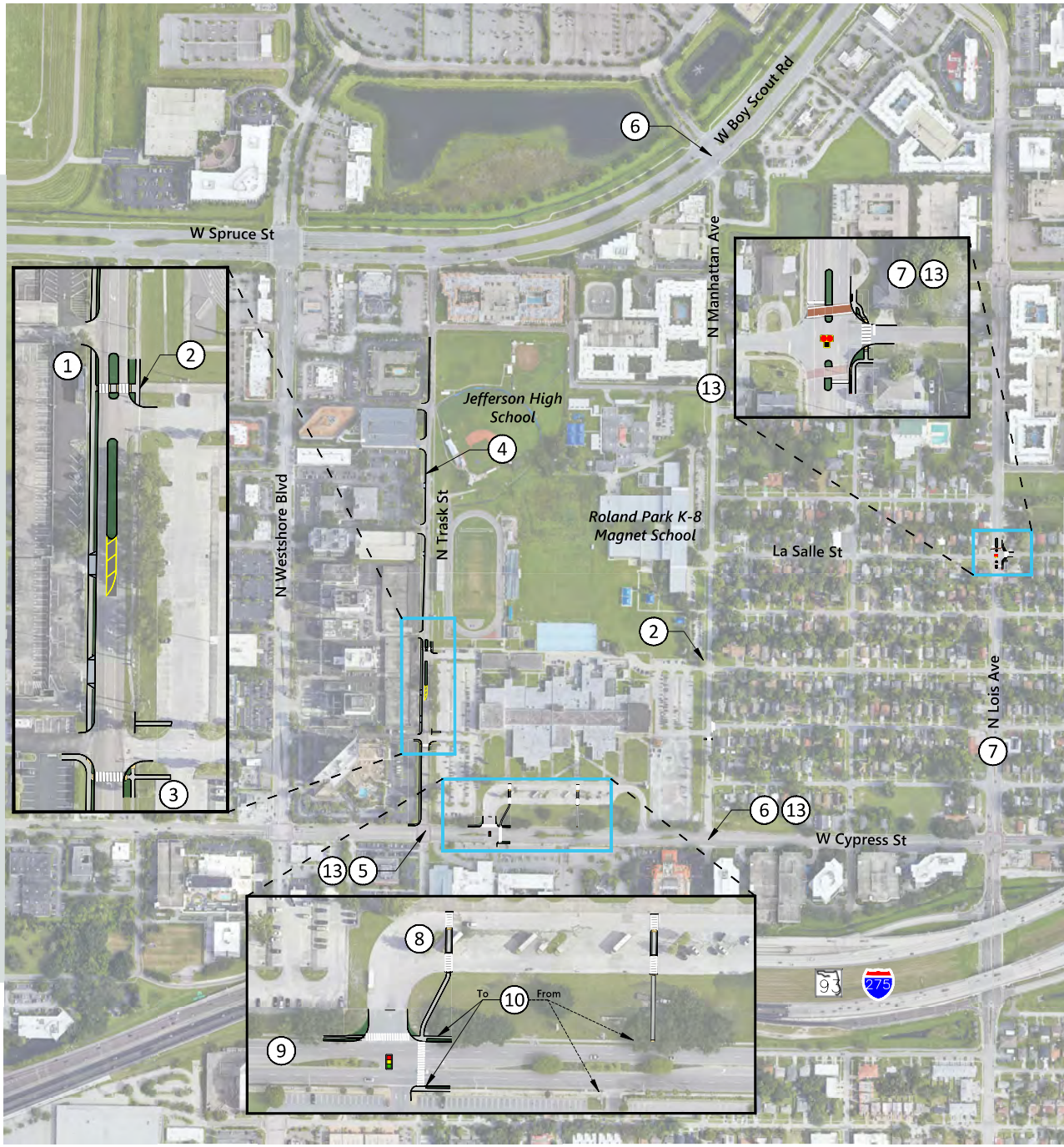
Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

1. Add a marked crosswalk and landscape median. Consider providing a raised crosswalk.
2. Open sidewalk gates during student arrival and dismissal.
3. Add a marked crosswalk and a sidewalk connection to high school. Consider providing a raised crosswalk.
4. Add a sidewalk on the west side of Trask Street.
5. Fix pedestrian push buttons, update the intersection to meet current ADA standards, and provide a bus shelter on the northeast corner. During field work, the pedestrian push button on the northeast corner of the intersection was not functioning.
6. Conduct signal warrant analysis. If warranted, signalize intersection and add crosswalks.
7. Implement the Lois Avenue Complete Streets Plan. Some components of the plan include narrowing existing travel lanes to accommodate four foot bike lanes, widening the sidewalk on the east side of the roadway north of I-275, and adding crosswalks on the side streets.
8. Install a sidewalk connection to the high school.
9. Tighten curb radius. Evaluate signalizing intersection. If intersection is signalized, add crosswalks.
10. Consider relocating the existing bus stops on both the north and south sides of Cypress Street to encourage users to cross at the marked crossing.
11. Bring existing School Speed Zones into compliance with State Statute and install flashers.
12. Add street trees and public amenities in accordance with the Westshore Alliance Master Plan.
13. Collaborate with the Westshore Alliance to implement painted intersections.



Jefferson High School
West Cypress Street
Tampa, Florida

Figure 19

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

9. Just Elementary/Stewart Middle/ Blake High School

Just Elementary School, Stewart Middle Magnet School, and Blake High School have adjoining properties, and would all benefit from improvements in the area, thus they were all included in this study. There is a new development being constructed across the street from the three schools as part of the West River Plan. The West River Plan predominately includes residential uses including townhomes, low-rise and mid-rise multi-family housing. There are also plans for some retail and office use. The planned Rome Yard project has the opportunity to reconnect the grid network in the area and includes extending the Riverwalk as well as increasing the housing supply in the area. The additional housing units could affect enrollment boundaries and/or the number of students enrolled in the three schools, including the potential for more students in the future to come from within the immediate neighborhood rather than the region. Additional connections and improvements could be valuable once the development is completed.

Just Elementary School is located on W Spruce Street and had a 2021/2022 enrollment of approximately 280 students. The school enrollment boundary area, shown in Image 44, is about 2.5 square miles, with many students living within walking distance of the school, about a half mile for K-5 students. Concentrations of students at the school live in an apartment complex at the northern terminus of N Oregon Avenue and at a complex two blocks south of the school.

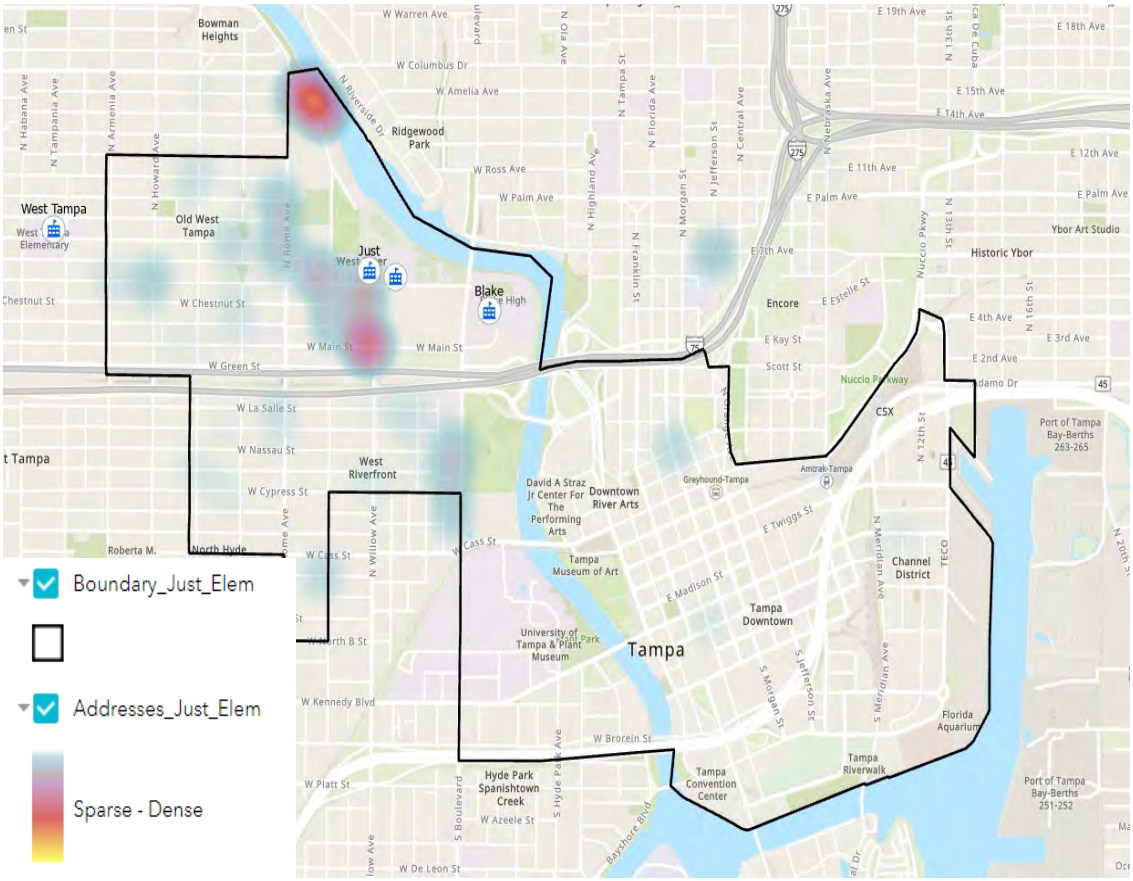


Image 52: Just Elementary School Enrollment Boundary

Stewart Middle Magnet School is located on W Spruce Street, directly adjacent to Just Elementary School. The middle school had a 2021/2022 enrollment of approximately 780 students. The school enrollment boundary area, shown in Image 45, is about 1 square mile. While many students live in the enrollment boundary, Stewart is a magnet school drawing students from across the county. Some students do live within walking and biking distance of the school.

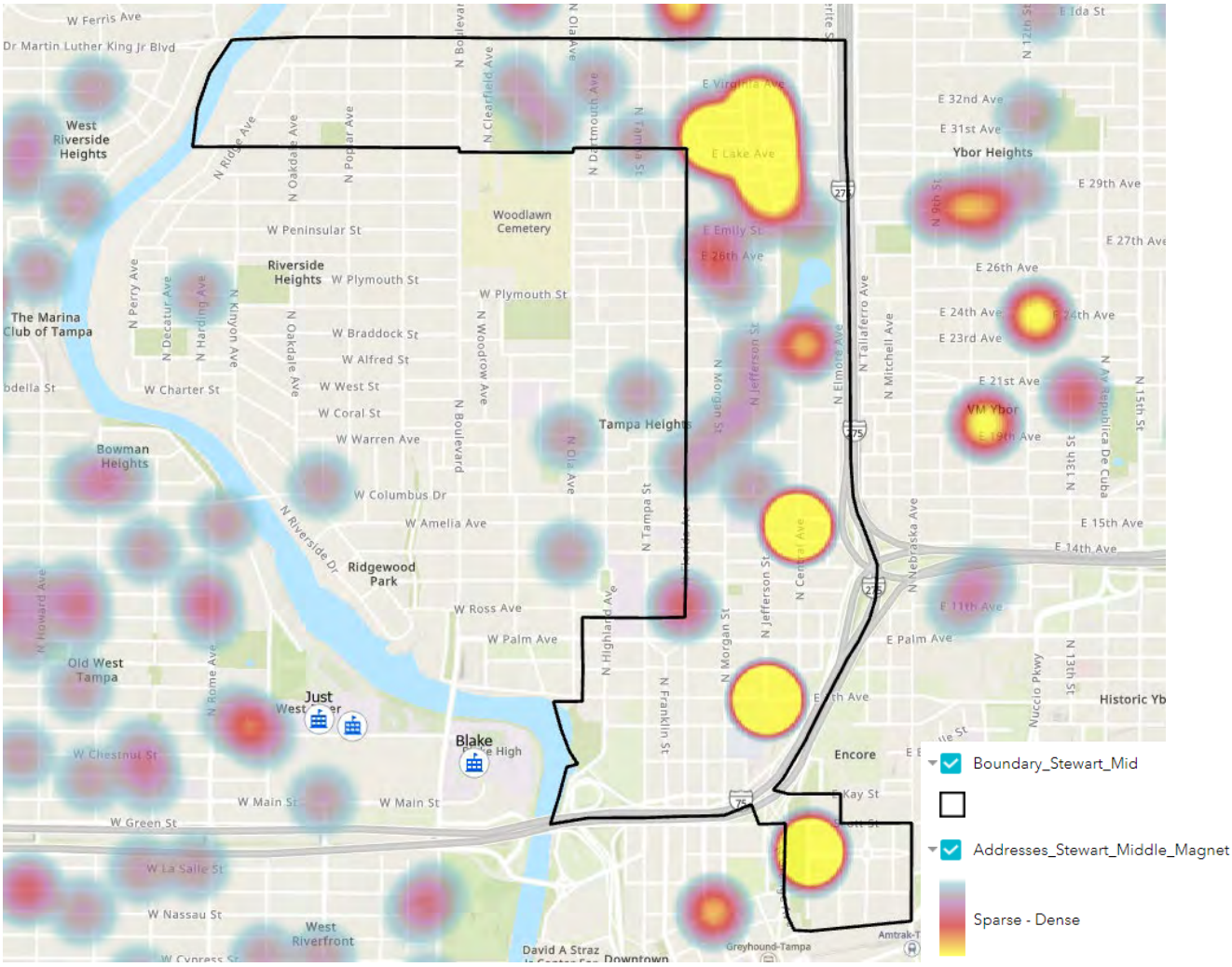


Image 53: Stewart Middle Magnet School Enrollment Boundary

Blake High School is located on N Boulevard, east of Stewart Middle Magnet School. The high school had a 2021/2022 enrollment of approximately 1,490 students. The high school has a large enrollment boundary area, shown on Image 46. While many students live in the enrollment boundary, Blake High School is a magnet school, drawing students from across the county. Some students do live within walking and biking distance of the school.

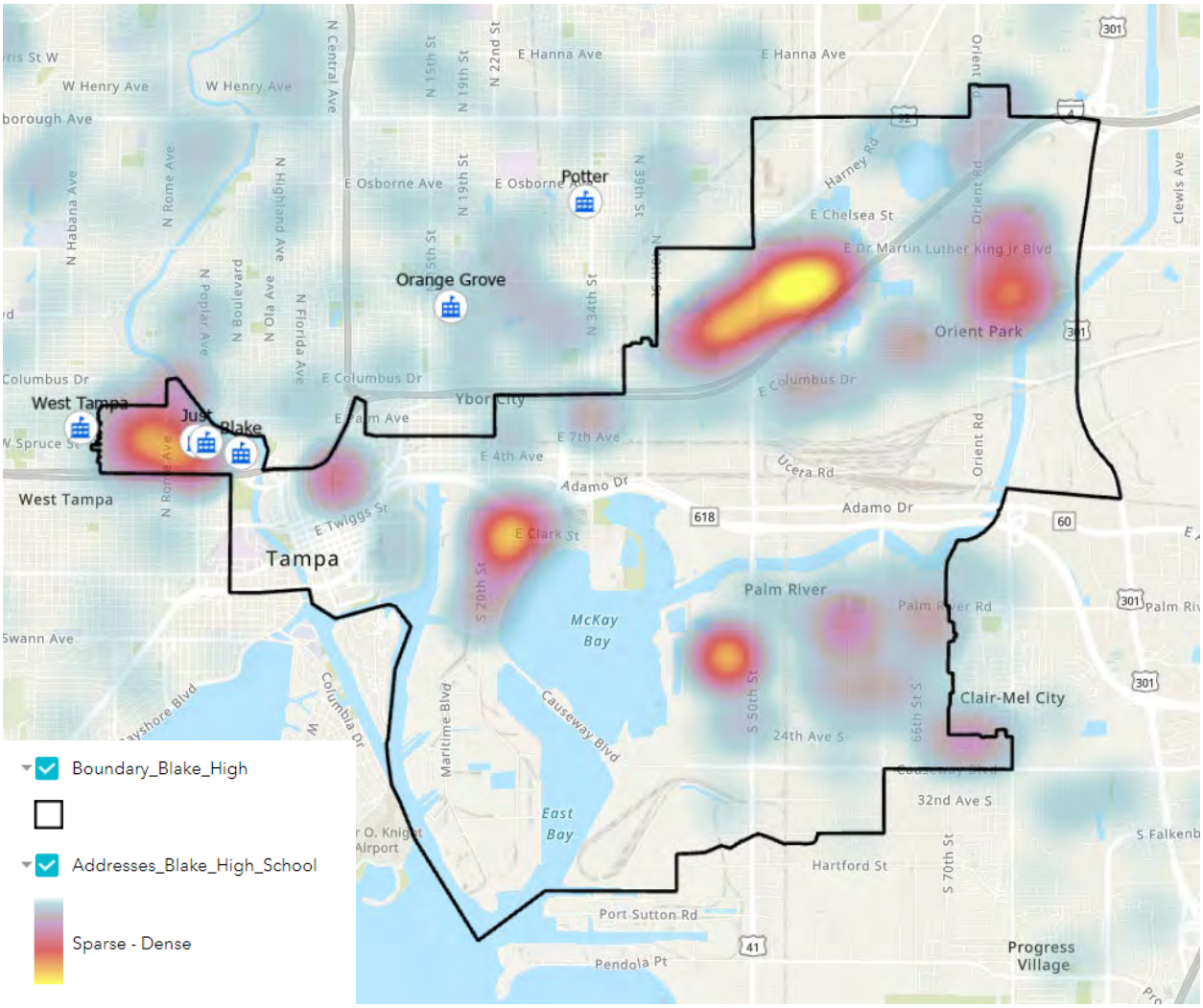


Image 54: Blake High School Enrollment Boundary

The following sections describe the general transportation and land use setting within the school enrollment area, observations of school circulation, and recommendations for transportation system improvements that could be implemented around and connecting to the school.

Surrounding Land Use and Transportation System Context

Just, Stewart, and Blake are located along W Spruce Street/Spruce Cove, at the edge of a developing residential neighborhood. I-275 to the south and the Hillsborough River to the north and east are barriers to students walking and biking to school. There is a residential neighborhood west of the schools that consists of single-family and multi-family residential uses. Commercial land uses in the area are primarily located on N Armenia Avenue, N Howard Avenue, and W Main Street. There are several other schools in the area, including Dunbar Elementary Magnet School and a private school. These schools would also benefit from the improvements recommended in this report.

Uses surrounding W Spruce Street/Spruce Cove are primarily residential west of N Oregon Avenue. East of N Oregon Avenue, the road is bounded by the school on the north and east and currently undeveloped land on the south and west. The residential portion has a high number of driveways accessing the roadway where conflicts could occur between people accessing their driveways and people walking, bicycling, or driving on the roadway. All of the intersections along the corridor, in the vicinity of the schools, are unsignalized. There are marked pedestrian crosswalks across W Spruce Street where it intersects with N Armenia Avenue, N Howard Avenue, N Albany Avenue, and N Oregon Avenue. There are also marked crosswalks at the entrances to Just and Stewart.

Key characteristics of W Spruce Street/Spruce Cove include:

- East-West local street (W Spruce Street), North-South local street (Spruce Cove)
- 24-foot typical cross section
- One vehicle travel lane in each direction
- On-street parking west of N Rome Avenue
- Posted speed limit of 25 miles per hour
    - 5 miles per hour in front of schools
- No bicycle facilities
- 5-foot to 6-foot sidewalk on one side of the street

West Spruce Street from N Oregon Avenue through the Blake Campus where it continues as Spruce Cove are owned by the School District.

W Main Street feeds directly into the Blake campus. Between N Armenia Avenue and N Oregon Avenue, the land uses fronting W Main Street are predominantly commercial with some residential uses. West of N Oregon Avenue, the land surrounding the roadway is primarily undeveloped or under construction. In the commercial section of W Main Street, vehicle access for many of the buildings is provided via alleys. However, some businesses and most of the residences have driveways on W Spruce Street. Alley access reduces the number of driveway conflicts for people walking and biking. The intersections on the road are signalized or side street stop controlled. The signalized intersections have marked crosswalks with pedestrian signals, though many of the crosswalks are faded. Not all of the signalized intersections have pedestrian push buttons, and several of the crossings do not meet ADA standards.

Key characteristics of W Main Street include:

- East-West Neighborhood Collector
- 40-foot typical cross section
- One vehicle travel lane in each direction, plus turn lanes at intersections
- On-street parking
- Posted speed limit of 25 miles per hour
    - 15 miles per hour in school zone when lights flashing
- No bicycle facilities
- Transit access (HART Route 7)
- An average of 2,460 vehicle trips per day along the roadway

There is a mixture of commercial and residential land uses along N Armenia Avenue. Many of the residences and businesses either do not have a driveway or the driveway is on a side street, reducing the number of driveway conflicts. N Armenia Avenue is one-way southbound and forms a couplet with N Howard Avenue. The intersections along the corridor in the vicinity of the schools are generally unsignalized except at W Green Street, W Main Street, and W Columbus Drive. The signalized intersections have marked crosswalks with pedestrian signals, though many of the crosswalks are faded. Several of the unsignalized intersections also have marked crossings and there is a pedestrian hybrid beacon approximately 80 feet south of W Pine Street. The pedestrian hybrid beacon does not have curb ramps and does not appear to be aligned with any pedestrian desire lines. Several other crossings do not meet ADA standards.

Key characteristics of N Armenia Avenue include:

- One-way Southbound Arterial
- 48-foot typical cross section
- Two travel lanes southbound, plus turn lanes at intersections
- On-street parking
- Posted speed limit of 40 miles per hour
- No bicycle facilities south of W St Joseph Street
- 5.5-foot sidewalks with no landscape buffer on both sides of the road
- Transit access (HART Route 7 and 14)
- An average of 7,860 vehicle trips per day along the roadway

N Howard Avenue is one-way northbound and forms a couplet with N Armenia Avenue. There are a mixture of commercial and residential land uses fronting the roadway. Like N Armenia Avenue, vehicle access to many of the residences and businesses is provided either via a side street or by on-street parking, reducing the number of driveway conflicts. The intersections along the corridor in the vicinity of the schools are generally unsignalized except at W Green Street, W Main Street, and W Columbus Drive. The signalized intersections have marked crosswalks with pedestrian signals, though many of the crosswalks are faded and not up to current ADA standards. Several of the unsignalized intersections also have marked crossings.

Key characteristics of N Howard Avenue include:

- One-way Northbound Arterial
- 40-foot typical cross section
- Two travel lanes northbound, plus turn lanes at intersections
- On-street parking
- Posted speed limit of 30 miles per hour
- No bicycle facilities south of W St Louis Street
- 6-foot to 8-foot sidewalks on both sides of the roadway
- Transit access (HART Route 7 and 14)
- An average of 14,880 vehicle trips per day along the roadway

N Boulevard connects the neighborhoods south of the Hillsborough River to the neighborhoods north of it. The roadway also provides access to the University of Tampa. South of I-275 N Boulevard is fronted primarily by multi-family housing, school uses, and Julian B Lane Riverfront Park. North of I-275, N Boulevard transitions into a bridge and then passes through a residential neighborhood to the north. South of the river there are few driveways on N Boulevard, but in the residential neighborhood north of the river, there are a high number of driveways presenting potential conflicts between vehicles and people walking and biking. There are several signalized intersections south of the river, each with pedestrian push signals, pedestrian push buttons, and marked crosswalks.

Key characteristics of N Boulevard include:

- North – South Arterial
- 42-foot to 77 foot typical cross section
- One vehicle travel lane in each direction, plus turn lanes at intersections north of W Main Street
- Two vehicle travel lanes in each direction, plus turn lanes at intersections south of W Main Street
- Typically, no on-street parking
- Posted speed limit of 35 miles per hour
- 5.5 foot-bike lanes
- 5-foot sidewalks on both sides of the road
- Transit access (HART Route 7)
- An average of 10,220 vehicle trips per day along the roadway

The City of Tampa Housing Authority plans to develop the parcel immediately north of Just Elementary to include a mixture of housing types, job resource training center, and reconnected streets. The project, known as Rome Yards, includes the potential to extend Butler Court and Willow Street through the existing Just Campus in conjunction with rebuilding the school. The project would also include extending the Riverwalk to the west, connecting with N Oregon Avenue, providing greater opportunities for people to walk and bike to all schools in the area. More information and a conceptual plan can be found here: http://www.thafl.com/westriver/strategicPlanning/wrRomeYard.aspx.

School Circulation

Figure 20 displays the general arrival/dismissal operations for the school. Just and Stewart use the same drop-off/pick-up area since their arrival and dismissal times are offset by about an hour and the campuses are adjacent. Walkers from Just all walk towards N Oregon Avenue, none walk towards Stewart or Blake. Several parents park along N Oregon Avenue and W Spruce Street west of N Oregon Avenue and their student(s) walk to the car. Dismissal for Just operates fairly well and traffic generally clears before Stewart and Blake release. Because Stewart and Blake are large schools that draw students from across the county, there is more vehicle traffic when those schools are dismissed. Additionally, the schools release within ten minutes of each other, with Stewart dismissing at 3:25 and Blake at 3:35. Traffic spills back to N Oregon Avenue and W Main Street. There is a sidewalk on the north side of W Spruce Street that is behind a school fence. The gate is unlocked at 1:30 for students who need to walk to or from Blake. There is a shared use path (Riverwalk) along the river that students can use to walk or bike to school to/from the east.

Image 55: Parents and Guardians Waiting for Students on Spruce Cove

Image 56: Queue in Entering and Leaving the Schools During Stewart and Blake Dismissal

Image 57: Shared Use Path Along River Behind Schools (will be incorporated into extension of Riverwalk)

Field Observations

Field Observations were conducted on May 3, 2022, during afternoon dismissal. Observations from the visit are shown in **Figure 21**. These observations are organized to note where there is incomplete infrastructure, parents/guardians were observed not to follow the school identified circulation strategy or the Florida Vehicle Code, and people were observed to drive in excess of the posted speed limit. Informational items, such as the location of crossing guards, are also noted. This section describes some of the key observations from the field visit.

Parents and guardians waiting for their student(s) park in areas where parking is prohibited. Some parents even park on the sidewalk on Spruce Cove and in the bike lane northbound on N Boulevard. This results in conflicts between vehicles and students walking and biking.

Image 58: Cars Parked on Sidewalk on Spruce Cove

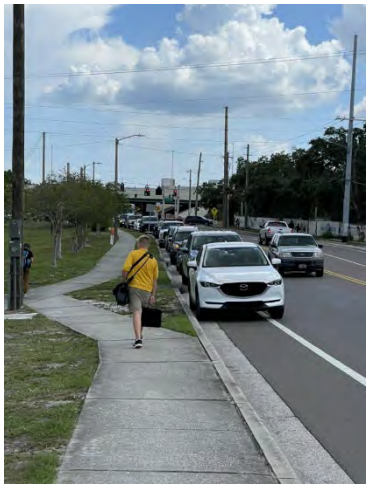


Image 59: Cars Parked in Bike Lane on N Boulevard

Many of the pedestrian facilities in the area have been neglected. Some of this is due to the construction south of the schools. For example, the crosswalk at Just is faded, the crosswalk at Just and at Stewart does not have a curb ramp, and there is debris or vegetation on several of the sidewalks. There is a closed road that used to connect W Spruce Street to N Boulevard. The pedestrian walkway across this roadway has been maintained, but it is narrow, has a lot of debris, and does not have curb ramps. The sidewalks are also narrow and students were observed walking in the street. As noted previously, W Spruce Street from east of Oregon Avenue is within the school district right of-way.

Image 60: Faded Crosswalks at with Exposed Brick at Entrance to Just

Image 61: Sand on Sidewalk and no ADA Ramp

Image 62: Students Walking in the Street

Image 63: Narrow Pedestrian Walkway and People Parking where Parking is Prohibited

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Just Elementary School, West Spruce Street
Stewart Middle School, West Spruce Street
Blake High School, North Boulevard

Figure 20

Hillsborough TPO Transportation Planning Organization

City of Tampa

TAMPA SCHOOL SAFETY

Tampa School Transportation Safety Study

Informational

Incomplete infrastructure

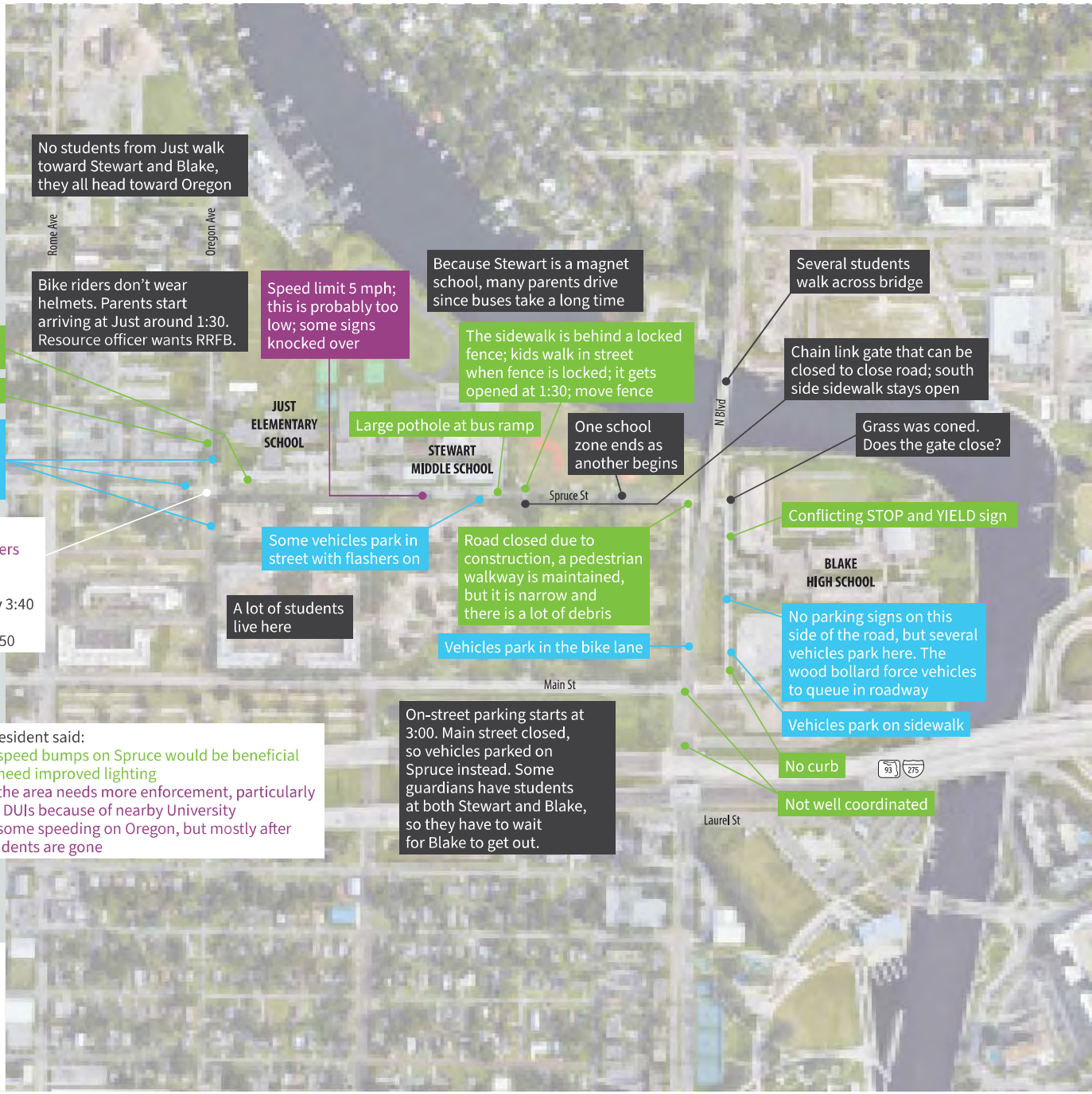
Driving in excess of posted speed limit/reckless driving

Parents/guardians not obeying rules

N

FAST FACTS

- Just Enrollment: 281 (98% minority population)
- Stewart Enrollment: 780 (14% white alone)
- Blake Enrollment: 1,485 (24% white alone)
- ADT on North Boulevard is about 10,200 vehicles/day on average over the past 5 years
- ADT on Main Street is about 2,500 vehicles/day on average over the past 5 years



Just Elementary School, West Spruce Street
Stewart Middle School, West Spruce Street
Blake High School, North Boulevard

Figure 21

Hillsborough TPO Transportation Planning Organization

City of Tampa

Engineering Recommendations

The improvements for Just, Stewart, and Blake are focused on educational and encouragement strategies, including a crosswalks to classroom project scheduled for implementation December 3, but some engineering countermeasures were identified based on the existing conditions as well as some preliminary roadway modifications were presented to project stakeholders, including the school principals, for discussion and feedback to identify a set of transportation system modifications generally aimed at providing safer facilities for people to walk or bike to and around the Just, Stewart and Blake campuses, slow the speeds of people driving, and refine the school circulation to reduce conflicts. The refined recommendations were shared with project stakeholders as well as school staff for their review and feedback. The resulting projects are shown on **Figure 22**. The numbers below correspond to the numbers on the figure.

Planning level cost estimates were developed by PGA for the specific improvements noted below to help the City of Tampa and the Hillsborough TPO understand the relative order of magnitude costs of specific improvements. It should be noted that these are high level cost estimates of materials and construction labor only, and do not include a host of factors including design, right-of-way, or environmental review. Additionally, there are economies of scale that occur when smaller projects are bundled together into larger projects. Cost estimate details are provided in Appendix E, with the relative order of magnitude cost noted after each recommendation. When there is no cost range noted, insufficient details were developed as a part of this planning study and more in-depth study would be needed to develop reasonable cost estimates.

$ = less than $10,000

$$ = between $10,000 and $25,000

$$$ = between $25,000 and $50,000

$$$$ = over $50,000

1. There is a parking lot on N Oregon Avenue north of Just that used to serve baseball fields. Contemplate formalizing this parking lot as a pick-up area. A connection to the school along the property is being considered as part of the Rome Yard development; school district representation should be included at planning meetings. Consider the extension of the West River Trail when planning the construction of the connection. (Planning Level Cost = $)
2. There is a marked crosswalk connecting the Martin Luther King Jr Center to the parking lot mentioned in Recommendation 1. There are no curb cuts at the intersection, and there is not a sidewalk connection leading from the east end of the crosswalk to the sidewalk on the east side of N Oregon Avenue. Install curb cuts and a sidewalk connection at the marked crossing. (Planning Level Cost = $)

3. People park in the landscaped area on the north side of W Spruce Street west of N Oregon Avenue to wait for their child(ren). The area is signed prohibiting parking. Consider allowing parking here or physically prevent people from parking here. (Planning Level Cost = $)
4. Just is planning to paint the intersection of N Oregon Avenue and W Spruce Street to emphasize that the area is a school zone. Implementation of the painted intersection plan is scheduled for December 3, 2022.
5. Implement a speed limit 15 mph on W Spruce Street and Spruce Cove and enforce limit. Consider dedicating Spruce Street back to the City for maintenance and enforcement. (Planning Level Cost = $)

Image 64: 5 MPH Sign

6. There is locked gate blocking the sidewalk east of the Stewart bus loop. The gate helps secure the campus and is unlocked at 1:30 for students walking to/from Blake. Install a raised crosswalk and curb ramps connecting the end of the sidewalk to the south side of street or relocate fence along south side of ball fields so that sidewalk can be used. (Planning Level Cost = $)

Image 65: Sidewalk Locked Behind Gate

7. There are several school speed zone signs around the schools, including an End Speed Zone sign where the Stewart school zone ends but the Blake school zone is beginning. Bring the existing School Speed Zones into compliance with State Statute. (Planning Level Cost = $$$$ - if existing equipment can be repurposed or if signage upgrades only, cost would be lower.)

Image 66: End School Zone Sign Between Stewart and Blake

8. As mentioned under Field Observations, there is a pedestrian walkway on the south side of W Spruce Street across an old road that is narrow, covered by debris, and lacking curb ramps. Improve the temporary pedestrian walkway. (Planning Level Cost = $)

Image 67: Debris Blocking Access to Pedestrian Path

9. At the entrance/exit to Blake's parking garage, there are conflicting Stop and Yield signs. Remove the Yield sign. (Planning Level Cost = $)

Image 68: Conflicting Stop and Yield Signs

10. The area south and west of the schools is being redeveloped. Reevaluate area circulation when development is completed to provide direct pedestrian connections from the neighborhood to the campuses and reevaluate the magnet status of all schools. (Insufficient details to estimate cost.)
11. Vehicles are parked in the northbound bike lane on N Boulevard to wait for their student(s). Install signage to prohibit stopping or standing on this segment and enforce the prohibition. (Planning Level Cost = $)

Image 69: Parents Parked in Bike Lane on N Blvd

12. Vehicles are parked on the sidewalk on the east side of Spruce Cove to wait for their child(ren). Add a barrier between the sidewalk and travel lane to prevent drivers from parking on the sidewalk and to protect pedestrians. (Planning Level Cost = $$)

Image 70: Parents Parked on Unprotected Sidewalk

13. The intersections of N Boulevard with W Main Street and W Green Street are poorly coordinated which leads to unnecessary delays and queuing. Optimize and coordinate the signal timings at these two intersections. (Planning Level Cost = $)
14. Consider adding a marked crosswalk on the east side of the intersection of Spruce Cove at W Main Street. (Planning Level Cost = $)
15. There is fence blocking access to the sidewalk south of W Main Street. Move the fence to the other side of the sidewalk or construct a sidewalk on school property. (Planning Level Cost = $$$)

Image 71: Sidewalk Behind Locked Gate South of Blake

TAMPA SCHOOL SAFETY

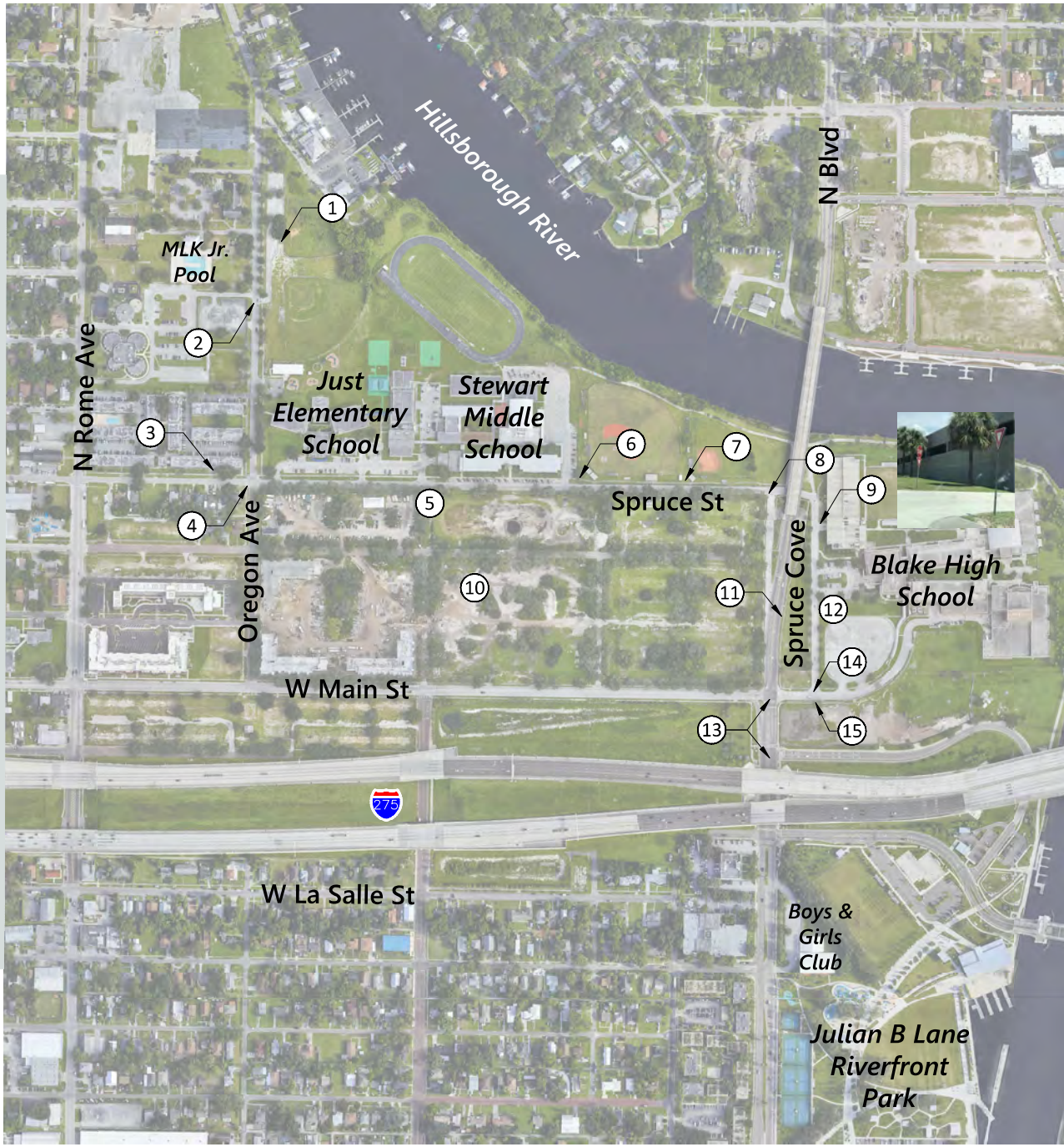
Tampa School Transportation Safety Study

N

1. Contemplate formalizing this parking lot as a pick-up area. A connection to the school along the property may be necessary when the parcel north of the schools is developed. Consider the extension of the West River Trail when planning the construction of the connection.
2. Install curb cuts and a sidewalk connection at marked crossing.
3. Consider allowing parking here or physically prevent people from parking on the north side of W Spruce Street west of N Oregon Avenue.
4. Implement painted intersection plan.
5. Implement a speed limit 15 or 20 mph on Spruce Street and Spruce Cove and enforce limit; consider dedicating Spruce Street back to the City for maintenance and enforcement.
6. Install a raised crosswalk and curb ramps connecting the end of the sidewalk to the south side of street, or relocate fence along south side of ball fields so that sidewalk can be used.
7. Bring existing School Speed Zone into compliance with State Statute and install flashers.
8. Improve temporary pedestrian walkway.
9. Remove Yield sign.
10. Reevaluate area circulation when development is completed to provide direct pedestrian connections from the neighborhood to the campuses
11. Install signage to prohibit stopping or standing.
12. Add a barrier between sidewalk and travel lane.
13. Optimize and coordinate signal timings.
14. Consider adding a marked crosswalk on the east side of the intersection.
15. Move fence to other side of sidewalk, or construct sidewalk on school property.

Implement educational and encouragement strategies detailed in the report including:

- Provide bicycle education, including helmet giveaway.
- Implement carpool program, targeting the Middle School and High School.
- Work with Blake High School to develop transportation safety videos targeted and K-12 students.
- Develop a walking routes program.



Just Elementary School, West Spruce Street
Stewart Middle School, West Spruce Street
Blake High School, North Boulevard
Tampa, Florida

Figure 22

Hillsborough TPO Transportation Planning Organization

City of Tampa Florida

A. School Selection Process

FEHR PEERS

Draft Memorandum

Date: April 20, 2022

To: Lisa Silva, Hillsborough TPO
Kelly Fearon, City of Tampa

From: Kathrin Tellez, Fehr & Peers

Subject: School Transportation Safety Study – School Selection

OR21-0009

Introduction

Fehr & Peers is working with the Hillsborough Transportation Planning Transportation Organization (TPO) and the City of Tampa to update the 2018 *School Safety Study* (2018 Study). The 2018 Study focused on multimodal safety and mobility reviews to identify engineering countermeasures at twelve schools within the Hillsborough County Public School (HCPS) district. Schools for the 2018 Study were selected based on numerous factors, including transportation safety, number of students living near the school, socioeconomic factors, and other school specific information. This study builds upon the 2018 Study and will select a set of schools for multimodal safety and mobility reviews, with physical improvements identified for up to five school and an educational and encouragement campaign developed for up to three schools.

The identification of school facilities to include in the focused assessment builds upon the process developed for the 2018 Study, using the most recently available data. Although the school ranking will be conducted for all schools in the district, the more detailed school assessments will focus on schools in the City of Tampa as the City requested this study.

HCPS is the 7th largest school district in the country, with over 224,000 students across 274 school sites, including 137 K-5 schools, 45 middle schools, 28 high schools, nine K-8 schools, four career centers, four technical colleges and 54 charter schools. The career centers, technical colleges and charter school are not considered in this assessment. Each school is in a unique setting, with different transportation advantages and challenges. As there are limited resources to conduct Safe Routes to School assessments, the prioritization process is intended to identify schools that would benefit the most from a focused assessment; schools that were included in the

2018 Study or other recent Safe Routes to School studies were included in the updated prioritization process but are not expected to be included in the focused assessments. This memorandum is organized to outline the data and weighting criteria used in the selection process analysis, the results of the preliminary weighting process.

Evaluation Criteria

Various data sets were provided by the Hillsborough TPO and HCPS. Additionally, Fehr & Peers summarized Census Data and collision data from the CDMS collision database system. Data used in the prioritization process includes:

- School location and enrollment
- Size/dimensions of enrollment boundary area
- Underserved community designations
- Percent of students qualifying for free or reduced lunch
- High Injury Network
- Bicycle and Pedestrian fatality and serious injury locations (2017-2021)
- All Traffic crashes that involve school aged people during travel to/from school times and other times
- Roadway network characteristics
- Proximity to other schools, libraries, and recreation centers

Based on the available data, the following weighting criteria was developed to help identity school locations that should be included in the detailed study. Scoring is out of 100 points, with up to 40 points awarded to criteria that relates to equity, 40 points awarded to criteria that relates to transportation safety, and 20 points awarded for all other criteria. The evaluation criteria used for this initial assessment is presented in **Table 1**.

Table 1: Evaluation Criteria

Criteria	Description/Data	Max Points/ Category
1. Within a designated underserved community	An underserved community is a census block group that has a high proportion of two or more protected classes, such as racial minorities, low-income groups, persons with disabilities, zero vehicle households, female head of household, and those with limited English proficiency. Ten different characteristics are considered by the Hillsborough TPO. Schools in communities with the most protected classes would receive the most points.	20 / Equity
2. Percent of students who receive a free or reduced cost lunch	Schools with the highest level of students receiving free or reduced cost lunches would receive the maximum points with others based on the proportionate difference.	20 / Equity

Table 1: Evaluation Criteria

Criteria	Description/Data	Max Points/ Category
3. Enrollment area includes Top 50 Corridor	The TPO Vision Zero Plan identifies 50 Corridors in the County that experience disproportionally high rates of fatal and serious injury collisions (KSI). These roadways can serve as barriers to walking and biking to school, and schools that have one of these roadways in their enrollment area would receive priority.	5 / Safety
4. Number of Bike/Ped KSIs within school enrollment boundary	Data representative of 2015 to 2021 was obtained from the CDMS system and all KSI collisions involving a person walking or bicycling were mapped to enrollment areas. Crashes that occurred during school hours and to school aged children were weighed higher, but all bicyclist and pedestrian related crashes were considered as they can be indicative of a barrier to walking and biking to school.	20 / Safety
5. Number of Total KSIs within school enrollment boundary	Data representative of 2015 to 2021 was obtained from the CDMS system and all KSI collisions regardless of mode were mapped to enrollment areas. Areas with high rates of crashes may serve as a barrier to people allowing their student to walk or bicycle to school. Crashes that occurred during school hours and to school aged children were weighed higher, but all crashes were considered.	15 / Safety
6. Density of students within enrollment area	Based on enrollment information from the 2021-2022 school year, the greater the density of students in the enrollment area, the greater the number of people who would benefit from an improvement or program.	5 / Other
7. Roadway network characteristics	Enrollment areas that have a higher percentage of arterial and collector roadways may have greater barriers to walking and bicycling access to school and select crossing improvements could help reduce those barriers.	5 / Other
8. Within a half mile of a school/library/community activity hub	Project could provide co-benefits to other nearby activity centers, including other schools.	10 / Other

Source: Fehr & Peers.

Other data that will be considered in individual school studies is presence/absence of sidewalks and bicycle facilities, HCPS bus stops and ridership, and the location of hazardous conditions as identified by HCPS.

A survey has been sent to all households with students in the district to identify current commute modes to school, transportation challenges and specific locations where improvements might be considered. A separate survey was also sent to all school administrators to learn about specific

school transportation challenges, as well as identify what schools in the district are doing to promote walking and bicycling to school. The results of these surveys will be used to help identify specific improvement projects, identify best practices related to safe access to school programs within the district, and to identify schools that might benefit the most from development of a customized safe access to school campaign, or identification of roadway network improvements.

Initial Ranking

Based on the data described above and the evaluation criteria, each school in the district was scored, with the top ranked for each school type identified, as shown in **Table 2** for K-5 schools, **Table 3** for middle schools, **Table 4** for high schools, and **Table 5** for K-8 schools. The majority of the top locations in each category are within the City of Tampa. This is due to several factors, including that the city has more underserved communities that other parts of the county, and as the city has a large proportion of the roadway network, a higher proportion of roadways are on the high injury network. **Table 6** presents the Top 20 schools within the City of Tampa that will be considered for more detailed evaluation as a part of this study. Top ranked schools not selected for inclusion in this focused assessment will be considered for evaluation as more funding becomes available.

After the application the evaluation criteria, elementary schools in the district scored a high of 53 points and a low of 7 points, with the top 11 locations presented in Table 2. The top locations scored between 53 and 44 points. The 2018 study only included one elementary school, which did not make it into the updated top ranked school list. Two schools participated in past educational programs, but those occurred prior to 2015 and none of the students that participated in those programs are currently enrolled.

Table 2: Districtwide K-5 School

Name	Location	Points (out of 100)	Notes
Shaw Elementary	11311 N 15th St, Tampa	53	Located adjacent to Copeland Park that was evaluated as a part of the Safe Access to Parks Study in 2021; Walking school bus/bicycle rodeo and safety education prior to 2015
Alexander Elementary	5602 N Lois Ave, Tampa	50	
Lomax Elementary Magnet	4207 N 26th St, Tampa	49	
Clair-Mel Elementary	1025 S 78th St, Unincorporated County	48	

Table 2: Districtwide K-5 School

Name	Location	Points (out of 100)	Notes
West Tampa Elementary	2700 W Cherry St, Tampa	48	
Just Elementary	1315 W Spruce St, Tampa	48	
Potter Elementary	3224 E Cayuga St, Tampa	47	Safety education prior to 2015
B.T. Washington Elementary	1407 Estelle St, Tampa	45	
Dunbar Elementary Magnet	1730 W Union St, Tampa	45	
Kenly Elementary	2909 N 66th St, Unincorporated County	44	
Crestwood Elementary	7824 N Manhattan Ave, Unincorporated County	44	

Source: Fehr & Peers.

The scoring for middle schools ranged between 11 and 57, with the top school scoring between 45 and 57. Three of the middle schools on the top ten list were evaluated as part of the 2018 Study, as noted in Table 3.

Table 3: Districtwide Middle School

Name	Location	Points (out of 100)	Notes
Young Middle Magnet	1807 E Martin Luther King, Tampa	57	Evaluated as a part of the 2018 Study
Ferrell Middle Magnet	4302 N 24th St, Tampa	53	Evaluated as a part of the 2018 Study
Orange Grove Middle Magnet	3415 16th St, Tampa	50	
Dowdell Middle	1208 Wishing Well Way, Unincorporated County	50	
Pierce Middle	5511 N Hesperides St, Unincorporated County	49	Evaluated as a part of the 2018 Study
McLane Middle	306 N Knights Ave, Brandon	48	
Stewart Middle Magnet	1125 W Spruce St, Tampa	47	
Shields Middle	15732 Beth Shields Way, Ruskin	47	
Giunta Middle	4202 S Falkenburg Rd, Riverview	45	
Madison Middle	4444 W Bay Vista Ave, Tampa	45	

Source: Fehr & Peers.

The scoring for high schools ranged between 19 and 53, with the top school scoring between 38 and 53. Three of the high schools on the top ten list were evaluated as part of the 2018 Study, as noted in Table 4.

Table 4: Districtwide High School

Name	Location	Points (out of 100)	Notes
Blake High School	1701 N Boulevard, Tampa	53	
Spoto High School	8538 Eagle Palm Dr, Riverview	52	
Middleton High School	4801 N 22nd St, Tampa	50	Evaluated as a part of the 2018 Study
Leto High School	4409 W Sligh Ave, Unincorporated County	48	Evaluated as a part of the 2018 Study
Hillsborough High School	5000 N Central Ave, Tampa	46	
Chamberlain High School	9401 N Boulevard, Tampa	45	Evaluated as a part of the 2018 Study
East Bay High School	7710 Old Big Bend Rd, Gibsonton	44	
Lennard High School	2342 E Shell Point Rd, Ruskin	42	
Jefferson High School	4401 W Cypress St, Tampa	41	
Armwood High School	12000 E US Highway 92, Seffner	38	

Source: Fehr & Peers.

The scoring for 5-8 schools ranged between 7 and 49. One of the K-8 schools was evaluated as part of the 2018 Study, as noted in Table 4.

Table 5: Districtwide K-8

Name	Location	Points (out of 100)	Notes
Sulphur Springs Elementary	8412 N 13th St, Tampa	49	Evaluated as a part of the 2018 Study
Dr. Carter G. Woodson K-8 School	8715 N 22nd St, Tampa	41	
Roland Park K-8 Magnet	1510 N Manhattan Ave, Tampa	35	
Rampello Downtown Partnership K-8	802 E Washington St, Tampa	35	
Pizzo Elementary	11701 USF Bull Run Dr, Tampa	31	

Table 5: Districtwide K-8

Name	Location	Points (out of 100)	Notes
Lutz Elementary	202 5th Ave SE, Lutz	14	
Tinker Elementary	8207 Tinker St, Tampa	7	

Source: Fehr & Peers.

The top 20 ranked schools within the City of Tampa are presented in Table 6, with a scoring range between 45 and 57. Seven of the top 20 schools were evaluated as part of the 2018 Study. Although those schools will not be included in the set of schools for a detailed engineering countermeasure assessment, they could be included as a focus study location for educational and encouragement programs. Of the top 20 schools in the City of Tampa, there are 8 elementary (of 74), 1 K-8 (of 7), 6 middle schools (of 25) and 5 high schools (of 15). Middle schools and high schools are over-represented in the top 20 ranking, likely due to their large enrollment areas that are more likely to include corridors with high crash frequencies.

Table 6: City of Tampa Schools – Top 20

Name	Location	Points (out of 100)	Notes
Young Middle Magnet	1807 E Martin Luther King, Tampa	57	Evaluated as a part of the 2018 Study
Shaw Elementary	11311 N 15th St, Tampa	53	Located adjacent to Copeland Park that was evaluated as a part of the Safe Access to Parks Study in 2021; Walking school bus/bicycle rodeo and safety education prior to 2015
Ferrell Middle Magnet	4302 N 24th St, Tampa	53	Evaluated as a part of the 2018 Study
Blake High School	1701 N Boulevard, Tampa	53	West River Build grant project
Middleton High School	4801 N 22nd St, Tampa	50	Evaluated as a part of the 2018 Study
Orange Grove Middle Magnet	3415 16th St, Tampa	50	
Alexander Elementary	5602 N Lois Ave, Tampa	50	On the boarder with the County and area included in a recent county study.

Table 6: City of Tampa Schools – Top 20

Name	Location	Points (out of 100)	Notes
Lomax Elementary Magnet	4207 N 26th St, Tampa	49	
Sulphur Springs Elementary	8412 N 13th St, Tampa	49	Evaluated as a part of the 2018 Study
West Tampa Elementary	2700 W Cherry St, Tampa	48	
Just Elementary	1315 W Spruce St, Tampa	48	
Stewart Middle Magnet	1125 W Spruce St, Tampa	47	
Potter Elementary	3224 E Cayuga St, Tampa	47	Safety education prior to 2015
Hillsborough High School	5000 N Central Ave, Tampa	46	
Chamberlain High School	9401 N Boulevard, Tampa	45	Evaluated as a part of the 2018 Study
B.T. Washington Elementary	1407 Estelle St, Tampa	45	
Dunbar Elementary Magnet	1730 W Union St, Tampa	45	
Madison Middle	4444 W Bay Vista Ave, Tampa	45	
Cleveland Elementary	723 E Hamilton Ave, Tampa	43	
Memorial Middle	4702 N Central Ave, Tampa	43	
Tampa Bay Boulevard Elementary	3111 W Tampa Bay Blvd	43	
Desoto Elementary	2618 Corrine St	43	
Shore Elementary Magnet	1908 2nd Ave	43	

Source: Fehr & Peers.

Next Steps

We look forward to discussing with the Hillsborough TPO and the City of Tampa schools to include in more focused assessments.

The completes our initial screening to select the schools to include in the Safe Access to School study. Please contact Kathrin Tellez at (321) 754-9902 if you have questions.

B. Family Survey Questions

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

HCPS leadership wants to hear from you about transportation challenges and successes for your students, faculty, and staff on their commute to and from school.

The district is working with the Hillsborough Transportation Planning Organization (TPO) on a Safe Routes to School (SRTS) study to identify schools in the district that would benefit from a review of transportation, with a focus on how we can get more people to walk, bike and take the bus to school to make your car lines more manageable and make it safer for everyone getting to school. Board Member Jessica Vaughn is a TPO member.

We are also interested in learning what strategies have worked at your school to manage transportation issues. To learn more about the work of TPO and this project, please visit: https://planhillsborough.org/school/

* 1. How many students, by age, currently live in your household (complete all that apply):

NOTE: If your household includes more than one transportation to more than one school, please complete the survey again for each route traveled.

Less than 5 years old	
5 years old	
6 years old	
7 years old	
8 years old	
9 years old	
10 years old	
11 years old	
12 years old	
13 years old	
14 years old	
15 years old	
16 years old	
17 years old	
18 years old or older	

* 2. In what ZIP code is your home located? (enter 5-digit ZIP code; for example, 00544 or 94305)

* 3. What is the nearest intersection to your home address?

Street 1	
Street 2	

* 4. What type of school does this student attend?

- ◯ Elementary
- ◯ Middle
- ◯ K-8
- ◯ High School
- ◯ Alternative (career center, alternative school, DJJ site)
- ◯ Exceptional Center
- ◯ Charter School
- ◯ Virtual or E-Learning

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Elementary Schools

5. Which elementary school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Middle Schools

6. Which middle school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

K-8 Schools

7. Which K-8 school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

High Schools

8. Which high school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Alternative Schools

9. Which alternative school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Exceptional Centers

10. Which exceptional center does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Charter Schools

11. Which charter school does your student attend?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Student Commute

* 12. On a typical week, how many days does your student use each of these transportation methods to get to school (answer should total 5)?

Walks alone	
Walks with a parent	
Walking School Bus (a form of transportation where students walk to or from school in a group chaperoned by one or more adults similar to how a bus would drive them to school)	
Bicycles alone	
Bike Train (a form of transportation where students bike to or from school in a group accompanied by one or more adults)	
Scooter/Skateboard	
School bus	
Public transit	
Personal vehicle (driven by student or someone else)	
Carpool	
Daycare Transportation	
Contracted Private Provider (e.g., ALS)	
Other form of transportation	

13. On a typical week, how many days does your student use each of these transportation methods to get home from school (answer should total 5)?

Walks alone	
Walks with a parent	
Walking School Bus (a form of transportation where students walk to or from school in a group chaperoned by one or more adults similar to how a bus would drive them to school)	
Bicycles alone	
Bike Train (a form of transportation where students bike to or from school in a group accompanied by one or more adults)	
School bus	
Public transit	
Personal vehicle (driven by student or someone else)	
Carpool	
Daycare Transportation	
Contracted Private Provider (e.g., ALS)	
Other form of transportation	

14. What time of day does your student typically commute **to school**?

- ○ Before 6:00 AM
- ○ Between 6:00 and 6:30 AM
- ○ Between 6:30 and 7:00 AM
- ○ Between 7:00 and 7:30 AM
- ○ Between 7:30 and 8:00 AM
- ○ Between 8:00 and 8:30 AM
- ○ Between 8:30 and 9:00 AM
- ○ After 9:00 AM

15. What time of day does your student typically commute **home from school**?

- ◯ Before 2:00 PM
- ◯ Between 2:00 and 2:30 PM
- ◯ Between 2:30 and 3:00 PM
- ◯ Between 3:00 and 3:30 PM
- ◯ Between 3:30 and 4:00 PM
- ◯ Between 4:00 and 4:30 PM
- ◯ Between 4:30 and 5:00 PM
- ◯ After 5:00 PM

16. How far does your student live from school?

- ◯ Less than 1/4 mile
- ◯ Between 1/4 mile and 1/2 mile
- ◯ Between 1/2 mile and 1 mile
- ◯ Between 1 mile and 2 miles
- ◯ More than 2 miles

17. About long does it take for your student to get to and from school?

- ◯ Less 5 minutes
- ◯ Between 5 and 10 minutes
- ◯ Between 10 and 20 minutes
- ◯ Between 20 and 30 minutes
- ◯ More than 30 minutes

18. Thinking about your student's commute to and from school, about how often do you encounter:

	Never	Rarely	Occasionally	Frequently	Always
Poor road conditions (e.g., potholes, damaged signs, uneven pavement)	◯	◯	◯	◯	◯
Vehicles speeding	◯	◯	◯	◯	◯
Bad lighting	◯	◯	◯	◯	◯
People hanging out by the roadway	◯	◯	◯	◯	◯
Traffic crashes	◯	◯	◯	◯	◯
Pedestrian injuries	◯	◯	◯	◯	◯
Bicyclist injuries	◯	◯	◯	◯	◯

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Unsafe Locations

* 19. Are there specific locations along the route where you or your student feel unsafe?

- ◯ Yes
- ◯ No

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Unsafe

20. You indicated that there are locations along your route where you or your student feel unsafe. What about these locations makes you/your student feel unsafe? (select all that apply)

- [ ] Distance
- [ ] Convenience
- [ ] Time of day
- [ ] Before and after school activities
- [ ] Speed of traffic along the route
- [ ] Sidewalks or paths along the route
- [ ] Safety of intersections or crossings
- [ ] Presence of crossing guards
- [ ] Violence or crime in the area
- [ ] Weather or climate
- [ ] Amount of light along the route
- [ ] Other (please specify):

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Getting Students to School Survey

Permission to Walk/Bike

21. Are there crossing guards along the route to your student's school?

- ◯ No
- ◯ Yes

22. In the past year, has your student asked you for **permission to walk or bicycle** to or from school?

- ◯ No
- ◯ Yes

23. In what grade would you **give your student permission** to walk or bicycle without an adult?

- ◯ PK
- ◯ K
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9
- ◯ 10
- ◯ 11
- ◯ I would not feel comfortable at any grade.

24. How much does your student's school encourage walking or biking to and from school?

◯ Not At All ◯ Very Little ◯ Somewhat ◯ Quite A Bit ◯ A Great Deal

25. How much fun do you think do you think it would be to walk or bike to school?

◯ Not At All ◯ Very Little ◯ Somewhat ◯ Quite A Bit ◯ A Great Deal

26. How healthy do you think it is to walk or bike to school?

◯ Not At All ◯ Very Little ◯ Somewhat ◯ Quite A Bit ◯ A Great Deal

27. Which of the following affect your decision to give your student permission to walk or bike to and from school? (select all that apply)

- [ ] Distance
- [ ] Convenience
- [ ] Time of day
- [ ] Before and after school activities
- [ ] Speed of traffic along the route
- [ ] Sidewalks or paths along the route
- [ ] Safety of intersections or crossings
- [ ] Presence of crossing guards
- [ ] Violence or crime in the area
- [ ] Weather or climate
- [ ] Amount of light along the route
- [ ] No peers or parents to walk or bike with my student
- [ ] Other (please specify):

28. Please rank the following conditions along the route in terms of their impact on letting your child walk or bike to and from school (1-Most Impact to 11-Least Impact):

Distance

Convenience

Time of day

Before and after school activities

Speed of traffic along the route

Sidewalks or paths along the route

Safety of intersections or crossings

Presence of crossing guards

Violence or crime in the area

Weather or climate

Amount of light along the route

If there are other students in your household using a different route to and from school, **please complete the survey again** for each student and answer based on that student's route.

* 29. Which of these have affected your studenbt

- [ ] I have not noticed any differences.
- [ ] My student has **stopped** taking the school bus to or from school.
- [ ] My student has **started** taking the school bus to or from school.
- [ ] My student drives or rides to or from school in a car **less often**.
- [ ] My student drives or rides in a car to or from school **more often.**
- [ ] My student carpools to or from school **less** often.
- [ ] My student carpools to or from school **more** often.
- [ ] My student has **stopped** walking to or from school.
- [ ] My student has **started** walking to or from school.
- [ ] Other (please specify)

30. If your student travels to or from school alone, do you use any of these tools to monitor their arrival to school or home from school?

- [ ] My student does not travel to or from school alone.
- [ ] Phone Call
- [ ] Text Message
- [ ] Phone Application
- [ ] Life360
- [ ] Other (please specify)

C. Principal Survey Questions

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

HCPS leadership wants to hear from you about transportation challenges and successes your students experience on their commute to and from school.

The district is working with the Hillsborough Transportation Planning Organization (TPO) on a Safe Routes to School (SRTS) study to identify schools in the district that would benefit from a review of transportation, with a focus on how we can get more people to walk, bike and take the bus to school to make your car lines more manageable and make it safer for everyone getting to school. Board Member Jessica Vaughn is a TPO member.

We are also interested in learning what strategies have worked at your school to manage transportation issues. More information about the project can be found at: Tampa School Safety Study | Plan Hillsborough

* 1. What type of school do you lead?

- ◯ Elementary
- ◯ Middle
- ◯ K-8
- ◯ High School
- ◯ Other (please specify)
- ◯ Alternative (career center, alternative school, DJJ site)
- ◯ Exceptional Center
- ◯ Charter School

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

2. Which elementary school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

3. Which middle school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

4. Which K-8 school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

5. Which high school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

6. Which alternative school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

7. Which exceptional center do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

8. Which charter school do you lead?

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

9. Would your school benefit from a transportation study?

- ◯ Yes
- ◯ No
- ◯ Unsure

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

10. Please describe what type of support your school would be most interested in receiving during a transportation study.

11. Please describe why you are not interested in a transportation study for your school.

12. Please estimate what percent of your students commute to and from school using each of these forms of transportation (responses must total 100):

Walks alone	
Daycare Transportation	
Single student in a private vehicle	
Walks with a parent	
Carpool in a private vehicle with another student in same household	
Carpool in a private vehicle with another student that does not live in the same household	
Bicycling	
Walking	
Walking School Bus (a form of transportation where students walk to or from school in a group chaperoned by one or more adults similar to how a bus would drive them to school)	
Scooter/Skateboard	
Uber/Lyft	
Dropped off at an off-campus location near school then walks to campus from that location	
Bike Train (a form of transportation where students bike to or from school in a group accompanied by one or more adults)	
District School Bus	
Public Bus	
Other form of transportation	

13. What percent of students who take the Public Bus participate in the HART Bus Pass Program?

0 100

14. On a typical school day, even though this is not encouraged/allowed by HCPS, are students dropped off at locations other than the school's designated drop-off and pick-up line?

- Yes
- No
- Not Sure

15. Please describe any locations you are aware of where students are dropped off other than the school's designated drop-off and pick-up line:

16. For each of the transportation methods listed below, please indicate which of these are challenges/barriers for each (select all that apply):

	Walk	Bike/Scooter/Skateboard	Bus
Distance	☐	☐	☐
Families not aware of routes	☐	☐	☐
Lack of sidewalk facilities connecting to campus	☐	☐	☐
Lack of bicycling facilities connecting to campus	☐	☐	☐
Lack of pedestrian facilities connecting to campus	☐	☐	☐
Lack of crossing guards	☐	☐	☐
Insufficient lighting	☐	☐	☐
Safety of intersections or roadways close to the school	☐	☐	☐
Violence or crime in the area	☐	☐	☐
Weather or climate	☐	☐	☐
Before or after school facilities	☐	☐	☐
Speed of traffic around the campus	☐	☐	☐

Other (please specify)

17. Does your school have a dedicated HCSO crossing guard?

- ◯ Yes
- ◯ No
- ◯ Not Sure

18. How many staff help to manage arrival and dismissal at your school?

19. Do you feel the number of staff that help direct arrival and dismissal is adequate?

- ◯ Yes
- ◯ No
- ◯ Not Sure

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

2022 Principals Safe Routes to School Survey

20. Are there specific intersections that are particularly difficult for students to navigate during their commute to and from school?

- ◯ Yes
- ◯ No
- ◯ Not Sure

21. Please describe the intersections that are particularly difficult and list any suggestions you might have to make the commute easier:

22. Does your school have any existing programs that promote walking, biking, or busing to school?

NOTE: Activities could include any form of walking or biking safety education, such as PE class with bike safety programming, extracurricular bicycle rodeo safety courses, classroom curriculum with walking safety tips, or flyers/marketing used to share information about walking, biking, or busing to school.

- ◯ Yes
- ◯ No
- ◯ Not Sure

23. Please describe the intersections that are particularly difficult and list any suggestions you might have to make the commute easier:

24. Does your school have any engaged groups, like the PTA or student groups, that might be interested in supporting safe route to school activities?

- ◯ Yes
- ◯ No
- ◯ Not Sure

25. Please list the group names and a point of contact for each of the engaged groups at your school:

26. What, if any, differences in student transportation to and from school have you noticed because of COVID-19 (select all that apply):

- [ ] No changes observed
- [ ] Fewer students taking the bus
- [ ] More students taking the bus
- [ ] Fewer students being driven to school
- [ ] More students being driven to school
- [ ] Fewer carpools
- [ ] More carpools
- [ ] Fewer students walking or biking
- [ ] More students walking or biking
- [ ] Other (please specify)

27. Has your school developed any unique dismissal procedures or strategies that other schools may benefit from implementing?

NOTE: Examples could include staggering dismissal by grade level, releasing bus riders or carpool students first, giving each student a placard with their name to place in the windshield of the car, or other similar ideas.

- ◯ Yes
- ◯ No
- ◯ Not Sure

28. Please describe the procedures you use for dismissal:

29. What is the most important transportation-related issue facing your school?

30. What ideas do you or your staff have that might facilitate safer and more efficient drop-off and pick-up for your school?

NOTE: This can include safer travel on surrounding streets or campus procedures.

31. Please feel free to upload any resources you have created to help with your arrival and dismissal procedures.

(e.g., PDF, DOC, PNG, JPEG, GIF)

Choose File Choose File No file chosen

D. Additional Yard Sign Options

HEY,

I'M WALKING HERE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

HEY,
I'M WALKING HERE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

HEY,

I'M WALKING HERE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

THIS IS A SCHOOL ZONE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

THIS IS A SCHOOL ZONE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

THIS IS A

SCHOOL

ZONE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

THIS IS A SCHOOL ZONE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

THIS IS A SCHOOL ZONE

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

DRIVE LIKE YOUR KIDS LIVE HERE

BECAUSE OURS DO

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

DRIVE LIKE YOUR KIDS LIVE HERE

BECAUSE OURS DO

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

DRIVE LIKE YOUR KIDS LIVE HERE

BECAUSE OURS DO

City of Tampa Florida

Hillsborough TPO
Transportation
Planning Organization

VISION ZERO TAMPA

YOUR LOGO HERE

E. Planning Level Cost Estimates

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Jefferson High							Rounded Cost	$	7,399,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
1. Add a marked crosswalk and landscape median. Consider providing a raised crosswalk.							$	5,326.75	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	36	$	584.28	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	13.05	$	1,577.09	
Median, landscaped, 10'			LF	$	8.99	300	$	2,697.20	Measured approximate distance shown on Jefferson High Shool Safety Study
2. Open sidewalk gates during student arrival and dismissal.							$	-	
3. Add a marked crosswalk and a sidewalk connection to high school. Consider providing a raised crosswalk.							$	6,386.19	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	42	$	681.66	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	72	$	257.76	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	13.05	$	1,577.09	
Sidewalk 6" (5' width)			LF	$	35.73	100	$	3,573.33	Measured approximate distance shown on Jefferson High Shool Safety Study
4. Add a sidewalk on the west side of Trask Street.							$	82,186.67	
Sidewalk 6" (5' width)			LF	$	35.73	2300	$	82,186.67	Sidewalk assumed to be added entire length of Trask St. from Spruce to Cypress
5. Fix pedestrian push buttons, update the intersection to meet current ADA standards, and provide a bus shelter on the northeast corner. During field work, the pedestrian push button on the northeast corner of the intersection was not functioning.							$	137,808.10	
	0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	$	2,187.16	8	$	17,497.28	
	0665 1 12	PEDESTRIAN DETECTOR, FURNISH & INSTALL, ACCESSIBLE	EA	$	1,157.15	8	$	9,257.20	
	0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	$	761.17	8	$	6,089.36	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	4	$	4,790.32	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	40	$	786.40	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	4.44	$	291.40	
Bus shelter, install			SF	$	99,096.14	1	$	99,096.14	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Jefferson High						Rounded Cost	$	7,399,000
Concept	**Pay Item**	**Description**	**Unit**	**Unit cost**		**Quantity**	**Total**	**Comment**
6. Signalize intersection and add crosswalks.							$ 279,546.59	
	0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	$	2,187.16	8	$ 17,497.28	
	0665 1 12	PEDESTRIAN DETECTOR, FURNISH & INSTALL, ACCESSIBLE	EA	$	1,157.15	8	$ 9,257.20	
	0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	$	761.17	8	$ 6,089.36	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	12	$ 14,370.96	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	100	$ 1,966.00	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	11.11	$ 729.15	
	0649 21 1	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 30'	EA	$	33,187.38	4	$ 132,749.52	
	0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	$	34.90	200	$ 6,980.00	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	84	$ 1,363.32	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$ 306.24	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	144	$ 515.52	
	0650 1 14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	$	1,712.03	8	$ 13,696.24	
	0670 5110	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA	AS	$	35,741.16	1	$ 35,741.16	
	0660 3 12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	$	9,055.49	4	$ 36,221.96	
	0660 3 11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	$	2,062.68	1	$ 2,062.68	
7. Implement the Lois Avenue Complete Streets Plan. Some components of the plan include narrowing existing travel lanes to accommodate four-foot bike lanes, widening the sidewalk on the east side of the roadway north of I-275, and adding crosswalks on the side streets.							$ 4,000,000.00	
Lois Avenue Complete Streets Plan			EA	$	4,000,000.00	1	$ 4,000,000.00	
8. Install a sidewalk connection to the high school.							$ 7,146.67	
Sidewalk 6" (5' width)			LF	$	35.73	200	$ 7,146.67	Measured approximate distance shown on Jefferson High Shool Safety Study

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Jefferson High							Rounded Cost	$	7,399,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
9. Signalize intersection, add crosswalks, and tighten curb radius.							$	285,964.19	
	0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	$	2,187.16	8	$	17,497.28	
	0665 1 12	PEDESTRIAN DETECTOR, FURNISH & INSTALL, ACCESSIBLE	EA	$	1,157.15	8	$	9,257.20	
	0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	$	761.17	8	$	6,089.36	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	12	$	14,370.96	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	100	$	1,966.00	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	11.11	$	729.15	
	0649 21 1	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 30'	EA	$	33,187.38	4	$	132,749.52	
	0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	$	34.90	200	$	6,980.00	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	84	$	1,363.32	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$	306.24	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	144	$	515.52	
	0650 1 14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	$	1,712.03	8	$	13,696.24	
	0670 5110	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA	AS	$	35,741.16	1	$	35,741.16	
	0660 3 12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	$	9,055.49	4	$	36,221.96	
	0660 3 11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	$	2,062.68	1	$	2,062.68	
	0520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	$	40.11	160	$	6,417.60	
10. Consider relocating the existing bus stops on both the north and south sides of Cypress Street to encourage users to cross at the marked crossing.							$	99,511.74	
Bus shelter, relocate			EA	$	99,511.74	1	$	99,511.74	
11. Bring existing School Speed Zones into compliance with State Statute.							$	28,879.78	
	0700 12 11	SIGN BEACON, F&I GROUND MOUNT- AC POWERED, ONE BEACON	AS	$	8,300.00	2	$	16,600.00	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	200	$	3,932.00	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$	321.03	2	$	642.06	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	4	$	4,790.32	
	0639 1111	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER FURNISHED BY POWER COMPANY	AS	$	2,915.40	1	$	2,915.40	
				Total:			**$**	**4,932,756.66**	
				MOT		10%	$	493,275.67	
				MOB		10%	$	493,275.67	
				Subtotal:			**$**	**5,919,308.00**	
				Project Unknowns		25%	$	1,479,827.00	
				Project Total:			**$**	**7,399,135.00**	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Just Elementary, Stewart Elementary, & Blake High				Rounded Cost		$	96,000
Concept	**Pay Item**	**Description**	**Unit**	**Unit cost**	**Quantity**	**Total**	**Comment**
1. Contemplate formalizing this parking lot as a pick-up area. A connection to the school along the property may be necessary when the parcel north of the schools is developed.						$ 1,275.45	
Single Post Sign, Install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$ 455.45	1.00	$ 455.45	
6' Concrete wheel stops with pins			EA	$ 41.00	20.00	$ 820.00	Assume 20
2. Install curb cuts and a sidewalk connection at marked crossing.						$ 2,680.00	
Sidewalk 6" (5' width)			LF	$ 35.73	75.00	$ 2,680.00	
3. Consider allowing parking here or physically prevent people from parking here.						$ -	
4. Implement painted intersection plan.						$ -	
5. Increase speed limit to 15 mph on Spruce Street and Spruce Cove and enforce limit; consider dedicating Spruce Street back to the City for maintenance and enforcement.						$ 1,023.86	
MUTCD (speed limit, stop, yield, etc.) sign, remove	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$ 56.48	2	$ 112.96	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$ 455.45	2	$ 910.90	
6. Install a raised crosswalk and curb ramps connecting the end of the sidewalk to the south side of street or relocate fence along south side of ball fields so that sidewalk can be used.						$ 3,162.86	Omitted fence relocation due to construction feasibility and school security concerns.
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$ 16.23	42	$ 681.66	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$ 6.38	24	$ 153.12	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$ 3.58	72	$ 257.76	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$ 148.17	2	$ 296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$ 120.85	13.05	$ 1,577.09	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$ 65.63	3	$ 196.89	
7. Bring existing School Speed Zone into compliance with State Statute.						$ 24,122.16	
	0700 6 11	HIGHLIGHTED SIGN, F&I GROUND MOUNT- AC POWERED, UP TO 12 SF	AS	$ 5,921.19	2	$ 11,842.38	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$ 19.66	200	$ 3,932.00	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$ 321.03	2	$ 642.06	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$ 1,197.58	4	$ 4,790.32	
	0639 1111	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER FURNISHED BY POWER COMPANY	AS	$ 2,915.40	1	$ 2,915.40	
8. Improve temporary pedestrian walkway.						$ 6,790.00	Solar RRFBs added for estimation purposes, however, this is an unsafe location for a crossing and the best alternative is to completely remove and use a different route.
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$ 16.23	30	$ 486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$ 3.58	48	$ 171.84	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$ 65.63	2	$ 131.26	
	0700 12 21	SIGN BEACON, F&I GROUND MOUNT- SOLAR POWERED, ONE BEACON	AS	$ 3,000.00	2	$ 6,000.00	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Just Elementary, Stewart Elementary, & Blake High				Rounded Cost		$ 96,000	
Concept	**Pay Item**	**Description**	**Unit**	**Unit cost**	**Quantity**	**Total**	**Comment**
9. Remove Yield sign.						$ 56.48	
MUTCD (speed limit, stop, yield, etc.) sign, remove	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$ 56.48	1	$ 56.48	
10. Reevaluate area circulation when development is completed to provide direct pedestrian connections from the neighborhood to the campuses.						$ -	
11. Install signage to prohibit stopping or standing.						$ 1,366.35	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$ 455.45	3	$ 1,366.35	
12. Add a barrier between sidewalk and travel lane.						$ 10,918.08	
Barrier, flexible delineator, install	0704 1 1	TUBULAR MARKER, DURABLE, 36" WHITE POST	EA	$ 151.64	72	$ 10,918.08	10' spacing
13. Optimize and coordinate signal timings.						$ 5,000.00	Design Effort. Assumed base timings only.
14. Consider adding a marked crosswalk on the east side of the intersection.						$ 939.42	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$ 16.23	42	$ 681.66	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$ 3.58	72	$ 257.76	
15. Move fence to other side of sidewalk, or construct sidewalk on school property.						$ 6,675.00	
Fence, relocate	0550 10228	FENCING, TYPE B, 5.1-6.0, RESET EXISTING	LF	$ 15.00	445	$ 6,675.00	Assumed Entire Distance along W Main St. from Spruce until Fence break
Implement educational and encouragement strategies detailed in the report including:						$ -	
· Provide bicycle education, including helmet giveaway.						$ -	
· Implement carpool program, targeting the Middle School and High School.						$ -	
· Work with Blake High School to develop transportation safety videos targeted and K-12 students.						$ -	
· Develop a walking routes program.						$ -	
				Total:		**$ 64,009.66**	
				MOT	10%	$ 6,400.97	
				MOB	10%	$ 6,400.97	
				Subtotal:		**$ 76,811.60**	
				Project Unknowns	25%	$ 19,202.90	
				Project Total:		**$ 96,014.49**	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Orange Grove Middle							Rounded Cost	$	240,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
1. Add sidewalk for walkers exiting the school from the north							$	5,181.33	
Sidewalk 6" (5' width)			LF	$	35.73	145	$	5,181.33	Measured about 145 FT on Google maps
2. Install marked crosswalks and an All-Way stop.							$	4,419.32	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	4	$	1,821.80	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	120	$	1,947.60	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$	306.24	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	96	$	343.68	
3. Install All-Way Stop according to City's existing plans. Additionally, install a raised crosswalk on the east leg of the intersection or other traffic calming device.							$	3,879.00	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	2	$	910.90	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	24	$	153.12	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	72	$	257.76	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	13.05	$	1,577.09	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	3	$	196.89	
4. Implement existing Complete Streets Improvements, which include walking and bicycling infrastructure, lane narrowing, and more frequent marked crosswalks.							$	46,356.22	
Signal, bicycle detection, install			EA	$	42,294.20	1	$	42,294.20	
Bicycle lane, 4', install on existing asphalt			LF	$	0.59	1300	$	765.22	Measured from 26th Avenue to Lake Avenue
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	60	$	973.80	Assumed 2 new crosswalks
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	140	$	501.20	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	4	$	1,821.80	
5. Remove Pedestrian Crosswalk sign and install All-Way Stop.							$	2,031.40	
	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$	56.48	1	$	56.48	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	4	$	1,821.80	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	24	$	153.12	
6. Allow parking on one side of the roadway.							$	282.40	Striping of dedicated parking spaces not recommended due to the need for crown shift to accomplish
	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$	56.48	5	$	282.40	
7. Update signage directing parents/guardians to the correct pick-up/drop-off location. The entrance to the car line is signed as Bus Only and there are signs on 26th Avenue directing drivers to 16th Street.							$	3,756.56	
MUTCD (speed limit, stop, yield, etc.) sign, remove	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$	56.48	2	$	112.96	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	8	$	3,643.60	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Orange Grove Middle							Rounded Cost	$	240,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
8. Install All-Way Stop.							$	2,128.04	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	4	$	1,821.80	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$	306.24	
9. Install marked crosswalks on all legs and raised crosswalks on the north and south legs.							$	7,423.34	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	120	$	1,947.60	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$	306.24	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	192	$	687.36	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	4	$	592.68	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	17.4	$	2,102.79	
Sidewalk 6" (5' width)			LF	$	35.73	50	$	1,786.67	
10. Narrow travel lanes to 10 feet and add four-foot bike lanes.							$	50,858.69	
Bicycle lane, 4', install on existing asphalt			LF	$	0.59	1700	$	1,000.67	
	0327 70 1	MILLING EXISTING ASPHALT PAVEMENT, 1" AVG DEPTH	SY	$	2.40	5288.89	$	12,693.33	Measured from 15th St to 19th St
	0337 7 81	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC B, FC-12.5, PG 76-22	TN	$	170.35	218.17	$	37,164.69	
11. Add a curb extension to reduce pedestrian crossing distance and install a raised crosswalk.							$	4,798.88	
	0110 1 1	CLEARING & GRUBBING	AC	$	46,267.37	0.007	$	331.39	
	0520 2 4	CONCRETE CURB, TYPE D	LF	$	46.96	50	$	2,348.00	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	3	$	196.89	
	0570 1 2	PERFORMANCE TURF, SOD	SY	$	4.50	3	$	13.50	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	24	$	389.52	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	8.7	$	1,051.40	
12. Bring existing School Speed Zone into compliance with State Statute.							$	28,879.78	
	0700 12 11	SIGN BEACON, F&I GROUND MOUNT- AC POWERED, ONE BEACON	AS	$	8,300.00	2	$	16,600.00	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	200	$	3,932.00	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$	321.03	2	$	642.06	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	4	$	4,790.32	
	0639 1111	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER FURNISHED BY POWER COMPANY	AS	$	2,915.40	1	$	2,915.40	
				Total:			**$**	**159,994.96**	
				MOT		10%	$	15,999.50	
				MOB		10%	$	15,999.50	
				Subtotal:			**$**	**191,993.95**	
				Project Unknowns		25%	$	47,998.49	
				Project Total:			**$**	**239,992.44**	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Potter Elementary							Rounded Cost	$	173,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
1. Install a raised crosswalk and work with CSX to upgrade crossing safety equipment.							$	3,114.27	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	2	$	910.90	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	8.70	$	1,051.40	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	3	$	196.89	
2. Refresh crosswalk markings.							$	1,034.94	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30.00	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48.00	$	171.84	
	0711 17 1	THERMOPLASTIC, REMOVE EXISTING THERMOPLASTIC PAVEMENT MARKINGS- SURFACE TO REMAIN	SF	$	1.71	220.00	$	376.20	
3. Add a vertical barrier between the roadway and sidewalk to prevent parents/guardians from blocking the sidewalk.							$	6,672.16	
Barrier, flexible delineator, install			EA	$	151.64	44	$	6,672.16	At 5-ft spacing for 220-ft
4. Convert Cayuga Street from N 31st Street to N 34th Street to one-way westbound and install two speed humps.							$	47,677.43	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	17.40	$	2,102.79	
MUTCD (speed limit, stop, yield, etc.) sign, install	0705 10 3	OBJECT MARKER, TYPE 3	EA	$	149.99	4	$	599.96	
Convert Roadway to One way			LF	$	52.30	860	$	44,974.68	Assume 860-ft
Consider painting the school mascot or a mural on this segment to emphasize that it is a school zone.							$	-	
5. Convert to an All-Way Stop. Install Stop Sign (R1-1) westbound, Do Not Enter sign (R5-1) eastbound, and One Way sign (R6-1).							$	3,051.46	
	0700 1 12	SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	$	1,504.25	2	$	3,008.50	Multiple panels per sign assembly
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	12	$	42.96	
6. Install signs prohibiting parking on both sides.							$	3,643.60	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	8	$	3,643.60	
7. Install One Way sign (R6-1).							$	1,366.35	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	3	$	1,366.35	
8. Convert crossing to a raised crosswalk. Consider giving the crossing guard a key to manually override the signal.							$	2,006.48	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	8.7	$	1,051.40	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Potter Elementary							Rounded Cost	$	173,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
9. Bring existing School Speed Zones into compliance with State Statute.							$	6,000.00	
	0700 12 21	SIGN BEACON, F&I GROUND MOUNT- SOLAR POWERED, ONE BEACON	AS	$	3,000.00	2	$	6,000.00	
10. Install a raised crosswalk and RRFBs.							$	19,083.04	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	12	$	76.56	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	8.7	$	1,051.40	
	0654 2 11	MIDBLOCK CROSSWALK: RECTANGULAR RAPID FLASHING BEACON, FURNISH & INSTALL- AC, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS	$	8,500.00	2	$	17,000.00	
11. Refresh stop bar markings and consider installing marked crosswalks.							$	964.98	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	30	$	486.90	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	48	$	171.84	
	0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	$	6.38	48	$	306.24	
12. Install sidewalks that intersects railroad tracks at a 90-degree angle. Sidewalks should have detectable warning surfaces before on either side of the tracks.							$	3,036.91	
Sidewalk 6" (5' width)			LF	$	35.73	70	$	2,501.33	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	136	$	486.88	
	0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6"	GM	$	5,356.98	0.01	$	48.70	
13. Install a railing to encourage users to stay on the sidewalk.							$	14,670.60	
Pedestrian Railing			LF	$	209.58	70	$	14,670.60	
14. Add Leading Pedestrian Intervals and bicycle detection at Dr Martin Luther King Jr Boulevard.							$	3,083.14	
	0671 2 40	TRAFFIC CONTROLLER, MODIFY	EA	$	3,083.14	1	$	3,083.14	

Total:		**$**	**115,405.35**
MOT	10%	$	11,540.53
MOB	10%	$	11,540.53
Subtotal:		**$**	**138,486.42**
Project Unknowns	25%	$	34,621.60
Project Total:		**$**	**173,108.02**

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Shaw Elementary							Rounded Cost	$	658,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
1. Relocate pedestrian crossing sign north to the raised crosswalk; consider installing Advance Pedestrian Crossing sign (W11-2).							$	847.12	
MUTCD (speed limit, stop, yield, etc.) sign, relocate	0700 1 50	SINGLE POST SIGN, RELOCATE	AS	$	391.67	1	$	391.67	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	1	$	455.45	
3. Connect bus stop to Fowler Avenue with a sidewalk.							$	3,216.00	
Sidewalk 6" (5' width)			LF	$	35.73	90	$	3,216.00	
4. Install raised crosswalk with advance yield lines and signage; consider installing RRFB.							$	19,912.61	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	36	$	584.28	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	60	$	214.80	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	10.875	$	1,314.24	
	0654 2 11	MIDBLOCK CROSSWALK: RECTANGULAR RAPID FLASHING BEACON, FURNISH & INSTALL- AC, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS	$	8,500.00	2	$	17,000.00	
	0710 11180	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, YIELD LINE	LF	$	7.58	24	$	181.92	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$	321.03	1	$	321.03	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Shaw Elementary							Rounded Cost	$	658,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
5. Bring existing School Speed Zones into compliance with State Statute.							$	24,122.16	
	0700 6 11	HIGHLIGHTED SIGN, F&I GROUND MOUNT- AC POWERED, UP TO 12 SF	AS	$	5,921.19	2	$	11,842.38	
	0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	$	19.66	200	$	3,932.00	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$	321.03	2	$	642.06	
	0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	$	1,197.58	4	$	4,790.32	
	0639 1111	ELECTRICAL POWER SERVICE, F&I, OVERHEAD, METER FURNISHED BY POWER COMPANY	AS	$	2,915.40	1	$	2,915.40	
6. Update crosswalk markings and convert to raised crosswalk with advance yield lines and signage; consider installing RRFB.							$	19,912.61	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$	16.23	36	$	584.28	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$	3.58	60	$	214.80	
	0711 11130	THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING	EA	$	148.17	2	$	296.34	
	0334 1 12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	$	120.85	10.875	$	1,314.24	
	0654 2 11	MIDBLOCK CROSSWALK: RECTANGULAR RAPID FLASHING BEACON, FURNISH & INSTALL- AC, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS	$	8,500.00	2	$	17,000.00	
	0710 11180	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, YIELD LINE	LF	$	7.58	24	$	181.92	
	0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	$	321.03	1	$	321.03	
7. Modify driveways to reduce speed of vehicles turning to N 15th Street. To prevent people from parking across sidewalk and landscaped areas, consider installing curb or some other physical barrier.							$	19,758.69	
Driveway Reconstruction			EA	$	7,571.45	2	$	15,142.89	
Curb, type f, install			LF	$	32.97	140	$	4,615.80	
8. Formalize lot for parking to maximize spaces and delineate walking routes from parking area to school entrance. Initially, parking spots can be delineated using railroad ties, wheel stops, pavers, or other material. Grass pave could be considered for a longer-term installation.							$	179,678.39	
Pavers			SF	$	17.63	10150	$	178,899.39	Lot Measured approximately 145'X70' on Google Maps
6' Concrete Wheel Stops with Pins			EA	$	41.00	19	$	779.00	Assumed 19 based on Drawing in Shaw Elementary PDF
9. Consider implementing a dual lane pick-up system where pick-up can be accomplished from both lanes. Additional operational details provided in text of report. Sign left lane for traffic going south on 15th Street and the right lane for traffic traveling north on 15th Street.							$	16,981.94	
Bollards			EA	$	1,601.97	10	$	16,019.70	
Remove Thermoplastic Markings			SF	$	1.61	220	$	354.20	
Crosswalk, mid-block marked, 10' (include 2 stop bars)			EA	$	608.04	1	$	608.04	
10. Install a gate or barricade to prevent traffic from using this entrance. Barricades can be formed by permanent or rolling planters, plastic or metal barricades, or other material.							$	13,308.80	
Barrier, concrete, install			LF	$	332.72	40	$	13,308.80	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): Shaw Elementary							Rounded Cost	$	658,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
11. Consider converting this roadway segment to one way only either during pick-up only or permanently to maximize on-site queue storage. Maintenance access to Copeland Pool may be affected and should be considered in final plans. Gates could be added and would have to be closed during pick-up/drop-off hours and reopened afterward.							$	14,413.30	
Convert Roadway to one way			LF	$	52.30	180	$	9,413.30	
	0550 60214	FENCE GATE, TYPE B, SINGLE, 18.1-20.0' OPENING	EA	$	2,500.00	2	$	5,000.00	
12. Evaluate for All-Way Stop-Control Installation.							$	2,050.60	
All Way Stop, Install			EA	$	2,050.60	1	$	2,050.60	
13. Construct a sidewalk on the north side of E 113th Avenue. This would likely require narrowing the roadway to 20 feet.							$	49,157.00	
Lane reduction, reduce by 4' (remove asphalt, no new bike lane)			LF	$	5.23	1200	$	6,277.00	
Sidewalk 6" (5' width)			LF	$	35.73	1200	$	42,880.00	
14. Evaluate potential to provide inset-parking on the east side of N 15th Street.							$	1,422.83	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	3	$	1,366.35	
	0700 1 60	SINGLE POST SIGN, REMOVE	AS	$	56.48	1	$	56.48	
15. Implement improvements identified in the Safe Access to Parks Study, which includes installation of additional traffic calming along N 15th Street and E 109th Avenue, construction of sidewalks at main park entrance connecting to the internal walking system, street lighting upgrades, and other transportation system improvements.							$	10,720.00	Omitted Traffic Calming element; Assumed 300 LF of SW
Sidewalk 6" (5' width)			LF	$	35.73	300	$	10,720.00	
16. Evaluate potential to install a mini-roundabout.							$	1,786.17	
Mini-roundabout, 6' diameter, install			EA	$	1,786.17	1	$	1,786.17	
				Total:			**$**	**438,441.79**	
				MOT		10%	$	43,844.18	
				MOB		10%	$	43,844.18	
				Subtotal:			**$**	**526,130.15**	
				Project Unknowns		25%	$	131,532.54	
				Project Total:			**$**	**657,662.69**	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): West Tampa Elementary						Rounded Cost	$ 236,000
Concept	**Pay Item**	**Description**	**Unit**	**Unit cost**	**Quantity**	**Total**	**Comment**
1. Implement improvements on Armenia Avenue and Howard Avenue as identified in the West Tampa Multi Modal Plan, which generally include adding bicycle facilities, narrowing travel lanes, eliminating excess turning capacity to shorten pedestrian crossing distances, widening the sidewalk, and constructing curb extensions. While all on-street parking is generally expected to be maintained, parking restrictions may need to be implemented to provide adequate sight-distance.						$ -	
2. Evaluate Macdill Avenue for lane repurposing and evaluate providing additional marked and controlled crossing locations connecting from neighborhoods to the schools.						$ -	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$ 455.45	6	$ 2,732.70	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$ 16.23	126	$ 2,044.98	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$ 3.58	216	$ 773.28	
3. Add marked crosswalk connecting teacher parking lot to the school.						$ 1,346.24	
	0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	$ 16.23	18	$ 292.14	
	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	$ 3.58	40	$ 143.20	
	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$ 455.45	2	$ 910.90	
4. Upgrade curb ramps for ADA compliance and install marked crosswalks and other appropriate crossing treatments.						$ 52,352.46	
Curb ramp, remove			EA	$ 2,010.47	12	$ 24,125.58	
Curb ramp, Install			EA	$ 2,149.56	12	$ 25,794.72	
Crosswalk, mid-block marked, 10' (include 2 stop bars)			EA	$ 608.04	4	$ 2,432.16	
5. Formalize process to close one block portion of Tampania Avenue during morning drop-up and afternoon pick-up. See report for additional details.						$ 10,000.00	Design Cost Only. Consider permanent closure if this is a significant issue.
6. Evaluate location of pedestrian crossing in conjunction with other planned improvements on Armenia Avenue. If crossing is to remain, provide ADA compliant curb ramps and advanced stop bar.						$ 33,417.48	
Curb ramp, remove			EA	$ 2,010.47	8	$ 16,083.72	
Curb ramp, Install			EA	$ 2,149.56	8	$ 17,196.48	
Paint, Stop bar, white, thermo, single, 24"			LF	$ 5.72	24	$ 137.28	

Tampa School Transportation Safety Study:
Planning-Level Cost Estimates

School(s): West Tampa Elementary							Rounded Cost	$	236,000
Concept	**Pay Item**	**Description**	**Unit**		**Unit cost**	**Quantity**		**Total**	**Comment**
7. Install No Left Turn sign (R3-2).							$	455.45	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	1	$	455.45	
8. Install No Right Turn Sign (R3-1).							$	455.45	
MUTCD (speed limit, stop, yield, etc.) sign, install	0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	$	455.45	1	$	455.45	
9. Extend curb to narrow to one lane to further reinforce the one-way designation.							$	16,934.77	
Bulb out, install			LF	$	40.81	415	$	16,934.77	
10. Update striping to reduce vehicle conflicts. Extend the southern curb to align the east edge of the segment with the exit on the west side.							$	28,266.86	
Lane reduction, reduce by 4' (remove asphalt, no new bike lane)			LF	$	5.23	600	$	3,138.50	
Speed bump, install			EA	$	748.15	2	$	1,496.31	
	0711 14660	THERMOPLASTIC, PREFORMED, MULTI COLOR ROUTE SHIELD	EA	$	1,575.47	15	$	23,632.05	
11. Install curb extensions.							$	12,362.28	Use of tubular markers in lieu of curb extension is not recommended as it will create a potential visual obstruction for elementary school students.
Bulb out, install			LF	$	40.81	81	$	3,305.34	
	0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	$	65.63	138	$	9,056.94	
12. Convert to All-Way Stop.							$	2,050.60	
All Way Stop, Install			EA	$	2,050.60	1	$	2,050.60	
				Total:			**$**	**157,641.58**	
				MOT		10%	$	15,764.16	
				MOB		10%	$	15,764.16	
				Subtotal:			**$**	**189,169.90**	
				Project Unknowns		25%	$	47,292.48	
				Project Total:			**$**	**236,462.38**	