

SCHOOL ROUTES ANALYSIS

HARBOR CITY ELEMENTARY SCHOOL

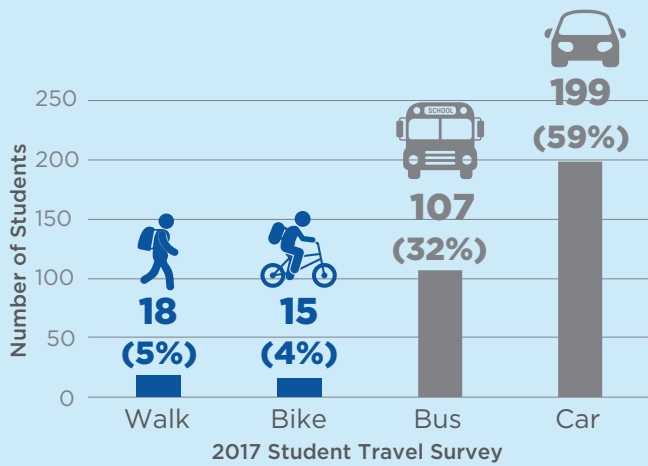


GRAPHICAL SUMMARY REPORT

JULY 2020



Student Travel Modes (2017)



Total Bicycle & Pedestrian Crashes within Study Area



School Aged Bicycle & Pedestrian Crashes within Study Area



2014 to 2018 Crashes from University of Florida's Signal Four Analytics Database

Signals and Crossings within Study Area



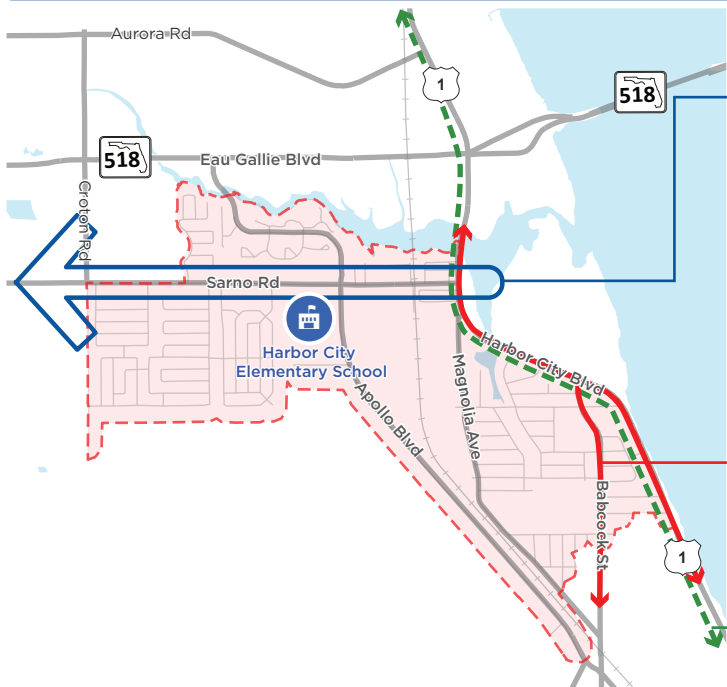
11 Signalized Intersections



2 Unsignalized Marked Crosswalks Across Major Streets



2 Crossing Guards at Apollo Blvd. & Sarno Rd. Intersection



Previous & Ongoing Plans

Sarno Road Corridor Study (2018)

- Enhance the FEC railroad crossing to include pedestrian facilities on both the north and south side of Sarno Road.
- Reconstruct sidewalks from Wickham Road to US 1 to 8' where possible (both sides of roadway).
- Construct a five-lane urban roadway section from Croton Road to Apollo Boulevard.
- Develop a comprehensive landscaping plan.

Bicycle & Pedestrian Master Plan (Ongoing)

- Bicycle Facilities and Sidewalks prioritized along US 1.
- Bicycle Facilities prioritized on Babcock Street.

Showcase Trails Network

- Trail planned along US 1.

Figure 1: Background Information

School Routes Analysis
Harbor City Elementary School

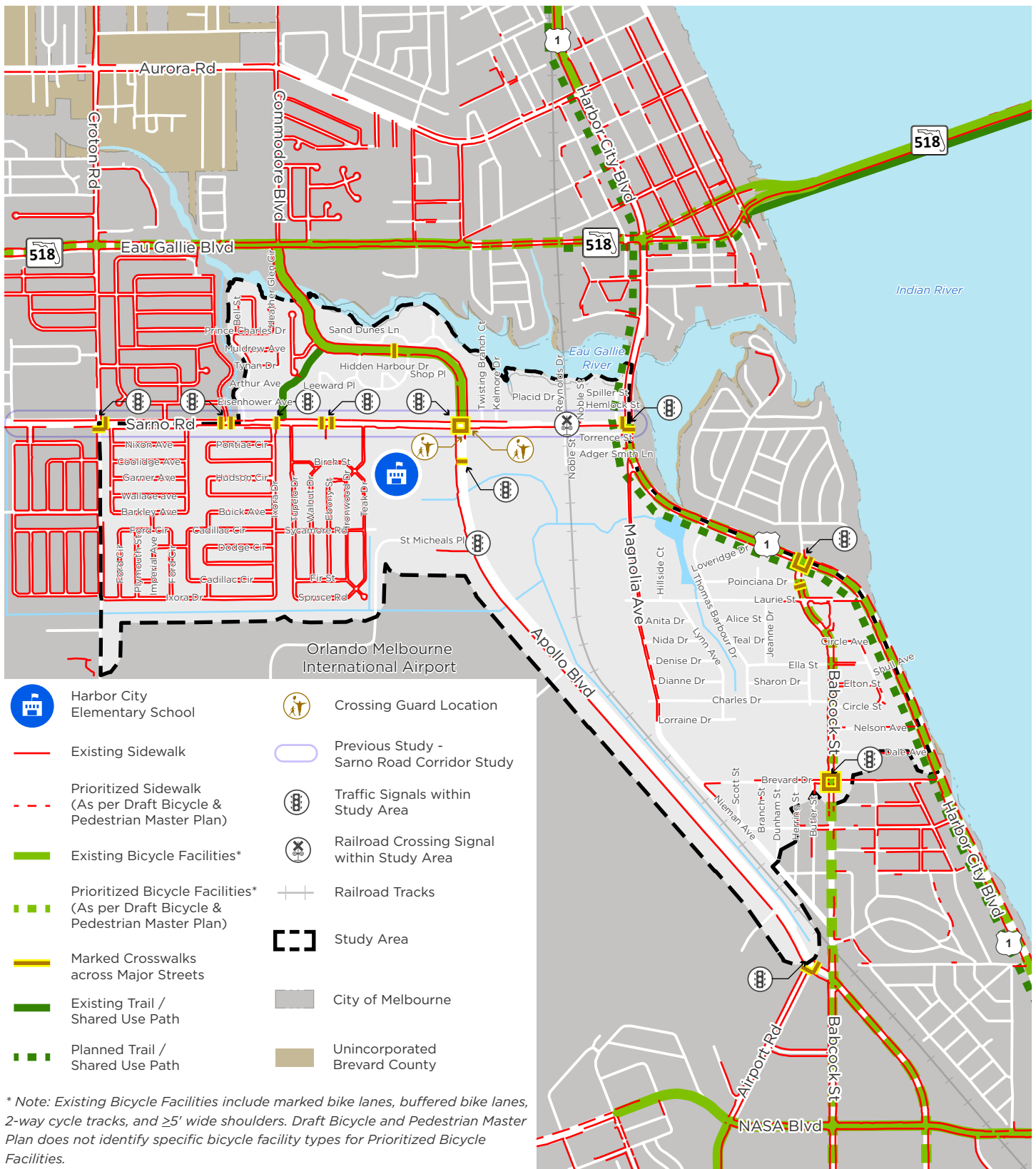


Figure 2: Existing and Planned Bicycle and Pedestrian Facilities

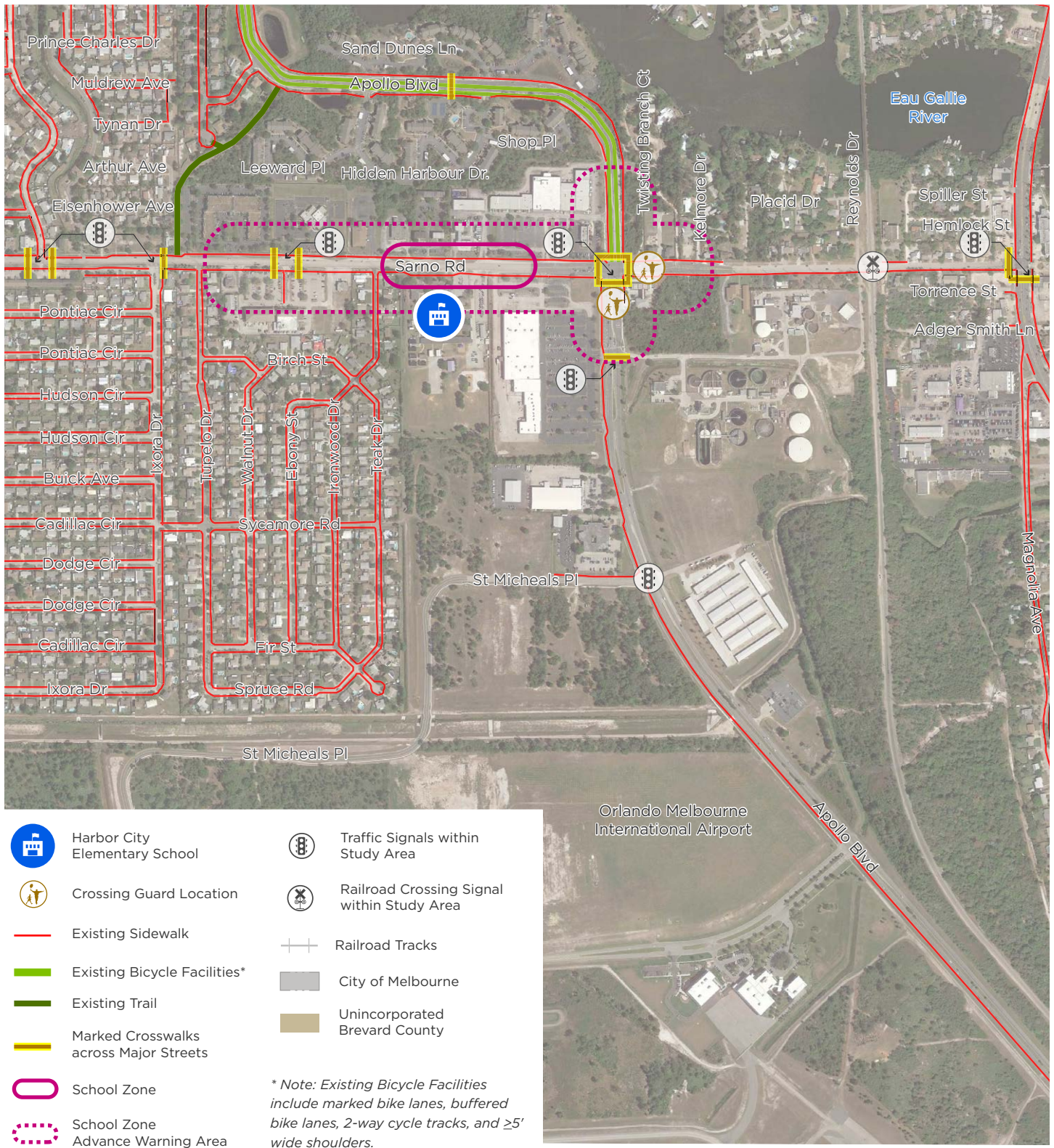


Figure 3: Existing Conditions School Context Aerial Map
 School Routes Analysis
Harbor City Elementary School

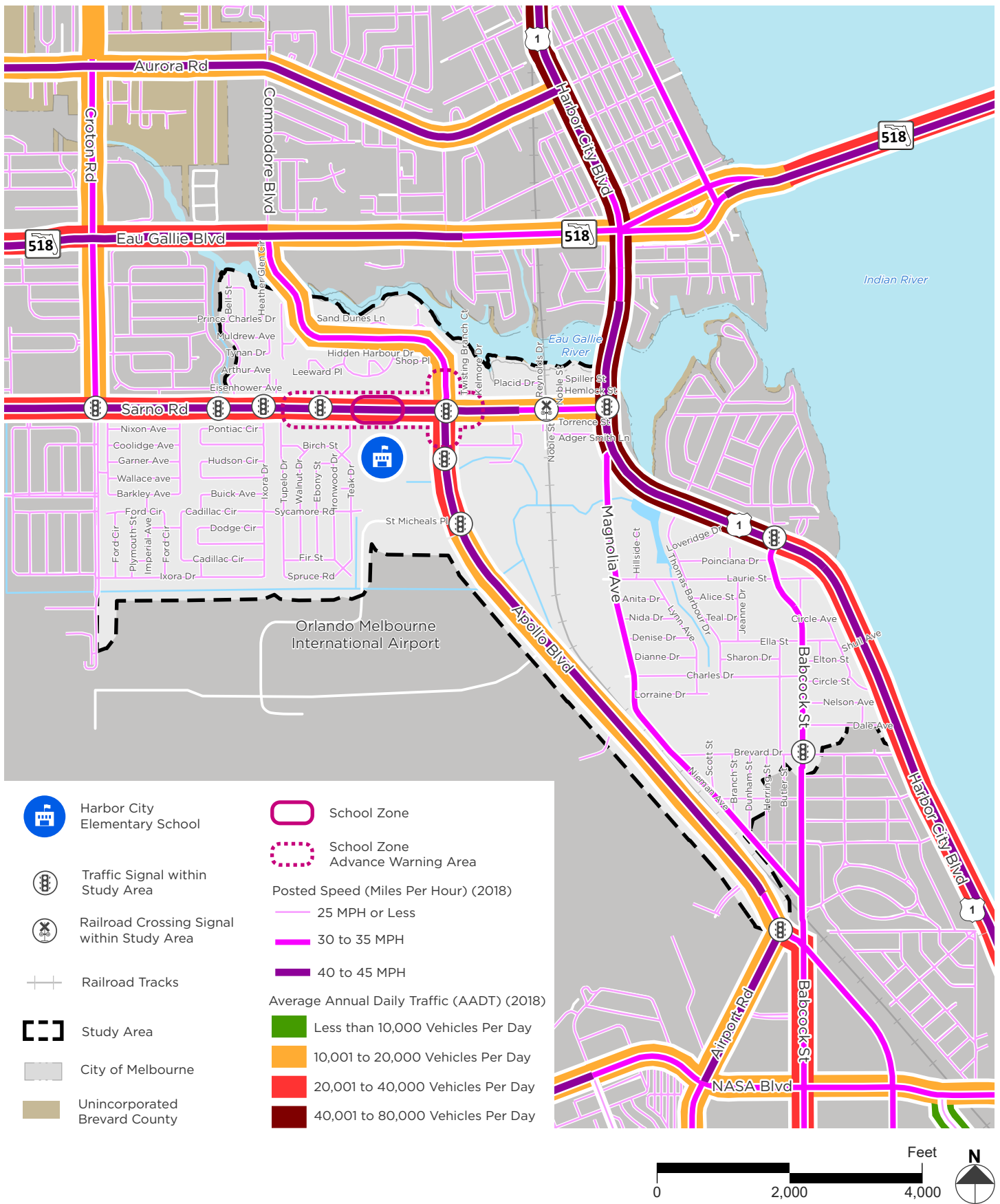
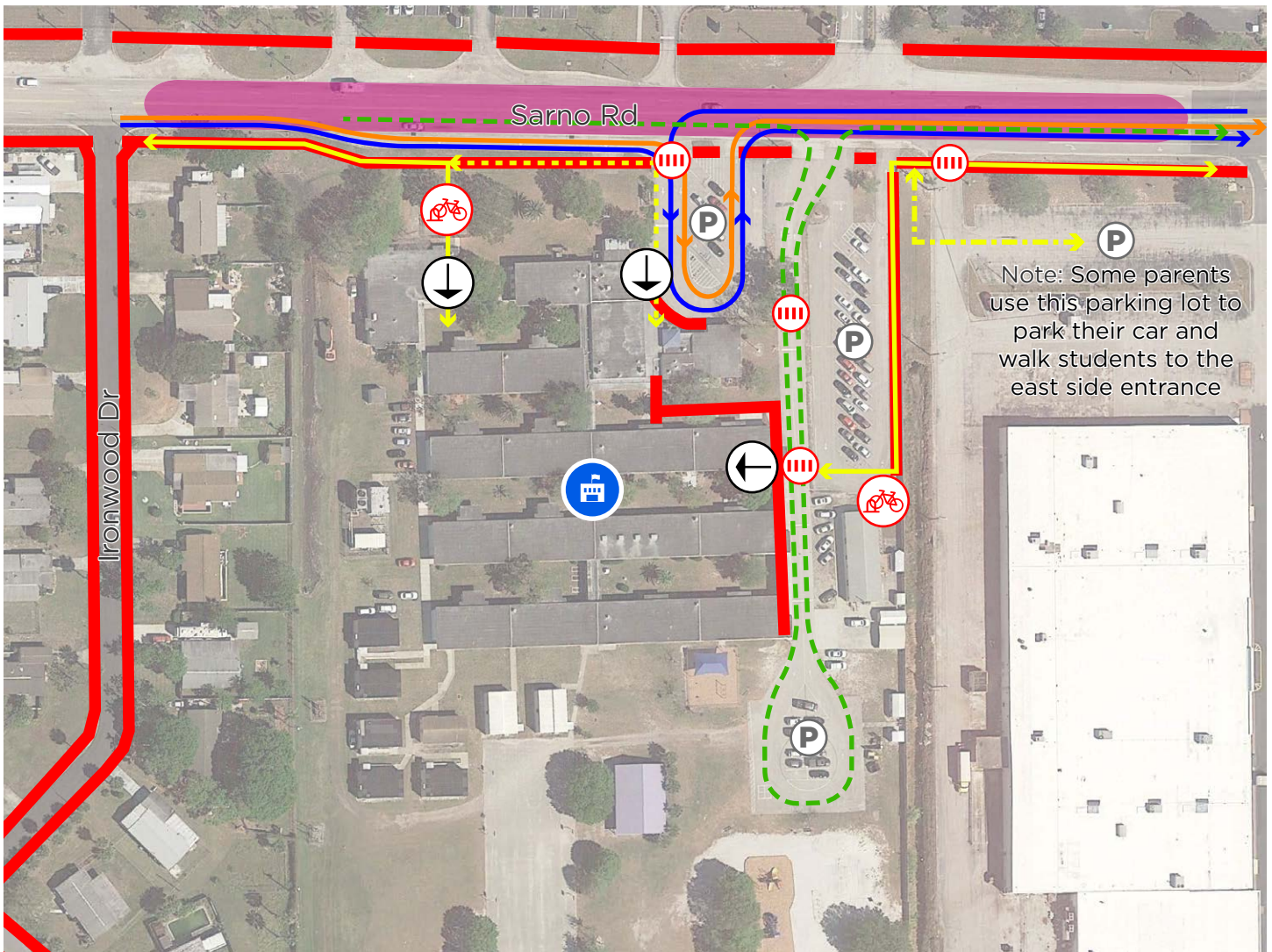


Figure 4: Existing Conditions Traffic Data
 School Routes Analysis
 Harbor City Elementary School















-  Harbor City Elementary School
 -  Marked Crosswalks
 -  School Building Entrance
 -  Bike Parking
 -  Car Parking
 -  School Zone
- Circulation Patterns**
-  Walkers/Bikers
 -  Walkers/Bikers Before 7:30 AM
 -  Park + Walk
 -  School Bus Loop
 -  Parent Drop-Off/Pick-Up Loop (4th grade to 6th grade)
 -  Parent Drop-Off/Pick-Up Loop (Kindergarten to 3rd grade)



Figure 5: Existing School Circulation Map
 School Routes Analysis
Harbor City Elementary School



Figure 6: Bicycle and Pedestrian Crashes (2014 - 2018)

School Campus Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
1	School Main Entrance	Build an 8 foot wide sidewalk connection from Sarno Road to the main school entrance door.	Sidewalk	Near-Term	<\$10,000
2	School Campus East Parking Lot	Extend the fenced walkway and mark a high visibility crosswalk across the parking lot.	Sidewalk	Near-Term	<\$10,000
3	School Campus Drop-Off/Pick-Up Loops	Re-stripe crosswalks as high-visibility crosswalks and add ADA compliant pedestrian ramps.	Crossing	Maintenance/ Near-Term	<\$10,000
4	School Campus Drop-Off/Pick-Up Loops	Rework school internal circulation to push drop-off/pick-up point further south and extend the drop-off/pick-up loop to add more stacking space for cars.	School Circulation	Long-Term	Further study is required
5	School Driveways along Sarno Road	Construct right-in/right-out channelized islands at school driveways alongside recommendation No. 4.	Sidewalks (Driveways)	Near-Term	\$15,000 to \$20,000

Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
6	Midblock Crossing across Apollo Boulevard near Hidden Harbor Drive	Install RRFB at the midblock crosswalk.	Crossing	Near-Term	\$45,000 to \$55,000
7	Sarno Road from Croton Road to US 1	Upgrade existing sidewalks to be ADA compliant along Sarno Road.	Sidewalk	Near-Term	Further study is required

Recommendations Table

School Routes Analysis

Harbor City Elementary School



Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
8	Sarno Road from Croton Road to US 1, Croton Road from Sarno Road to End of Roadway, Garfield Street, Ixora Drive, and Within the Brevard County Driver License and Tax Collector Complex	Upgrade/install ADA compliant pedestrian ramps and re-stripe high-visibility crosswalk across all legs of the signalized intersections	Crossing	Near-Term	\$65,000 to \$75,000
9	Sarno Road	Implement Sarno Road Corridor Study Recommendations - five lane cross-section with TWLTL, spot medians, access management, and 8 foot wide sidewalks on both sides.	Previous Study (Corridor)	Long-Term	\$20,885,000. Further study is required to estimate the cost for access management
10	Sycamore Road/ Cadillac Circle N and Ixora Drive Intersection	Upgrade/install ADA compliant pedestrian ramps and re-stripe high-visibility crosswalk across all legs.	Crossing	Near-Term	\$10,000 to \$15,000
11	Ironwood Drive, Tupelo Drive, Ixora Drive, Cadillac Circle, and Sycamore Road (See Figure 31 for extents)	Install neighborhood traffic calming treatments such as speed cushions, speed humps, curb extensions, street trees, etc.	Traffic Calming	Near-Term	Further study is required
12	Bell Street from Sarno Road to Tynan Drive	Build a 5 to 6 foot wide sidewalk on the east side of Bell Street.	Sidewalk	Near-Term	\$60,000 to \$70,000

Recommendations Table (Continued)

School Routes Analysis

Harbor City Elementary School



Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
13	Neiman Avenue from Lorraine Avenue to Babcock Street	Build a 5 to 6 foot wide sidewalk along both sides of Neiman Avenue	Sidewalk	Near-Term	\$500,000 to \$600,000
14	Bus Stop at Sarno Road and Apollo Boulevard	Make an ADA compliant bus stop. Add bench and shelter.	Sidewalk (Transit)	Near-Term	\$32,000
15	South and East of the School Campus	Conduct a feasibility study to build a 12 foot wide trail connection south of the school between the school campus and Sycamore Drive and Teak Drive intersection.	Feasibility Study (Trail)	Near-Term	Further study is required
16	South and East of the School Campus	Conduct a feasibility study to build a new roadway connection south of the school campus to connect to Apollo Boulevard and/or St. Michaels Place	Feasibility Study (Roadway)	Near-Term	Further study is required
17	Apollo Boulevard and Sarno Road Intersection	Install blank out signage for the south-bound right, east-bound right, and north-bound right turn lanes. These signs would show no right-turn-on-red when the conflicting crosswalk pedestrian push button is activated, but otherwise will stay blank.	Sign/Signal	Near-Term	\$25,000 to \$30,000
18	Sarno Road	Install school zone speed limit flashing beacons on mast arms to replace existing signs on poles.	Sign/Signal	Near-Term	\$155,000 to \$185,000

Recommendations Table (Continued)

School Routes Analysis

Harbor City Elementary School



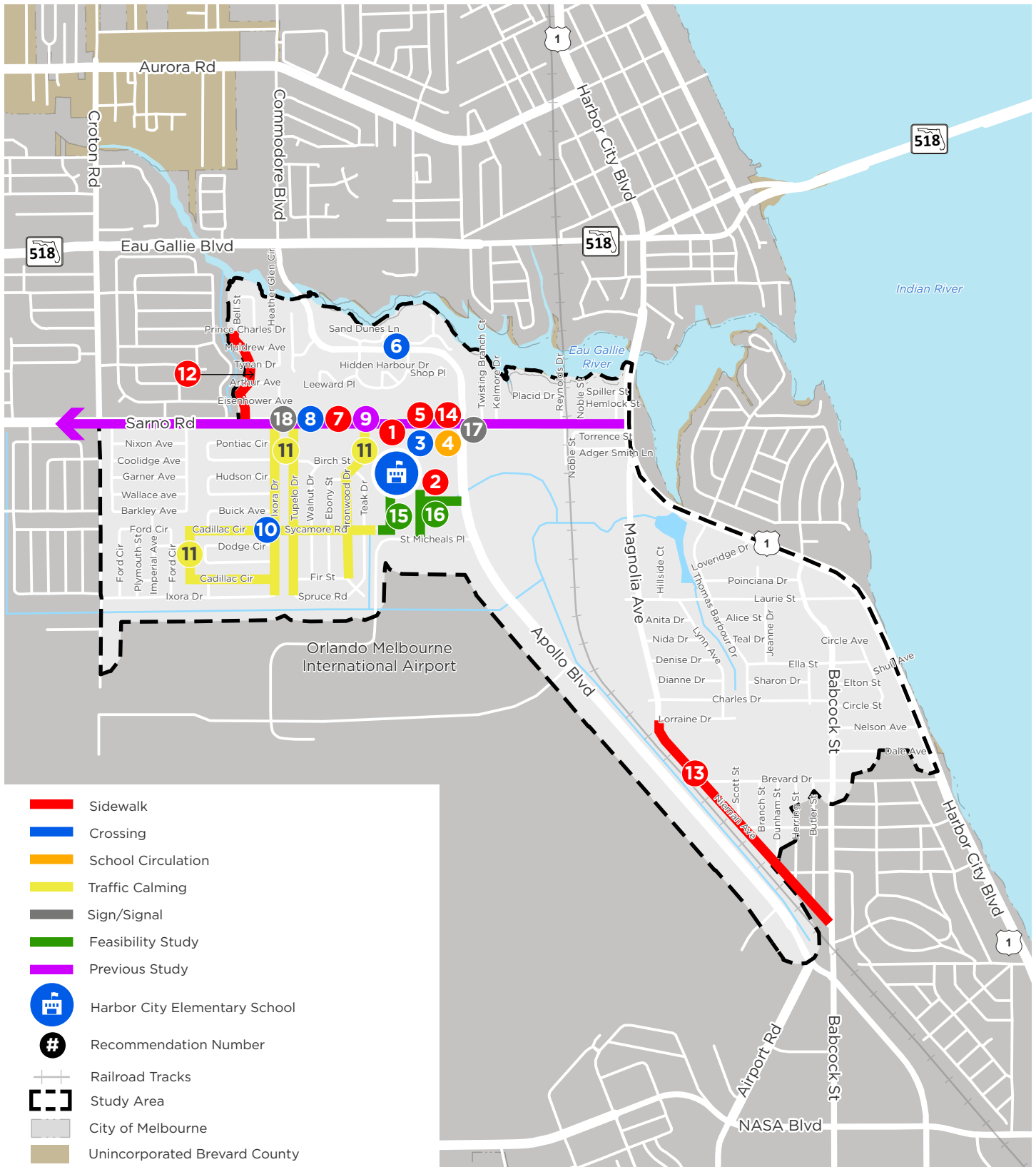


Figure 7: Recommendations
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Harbor City Elementary School



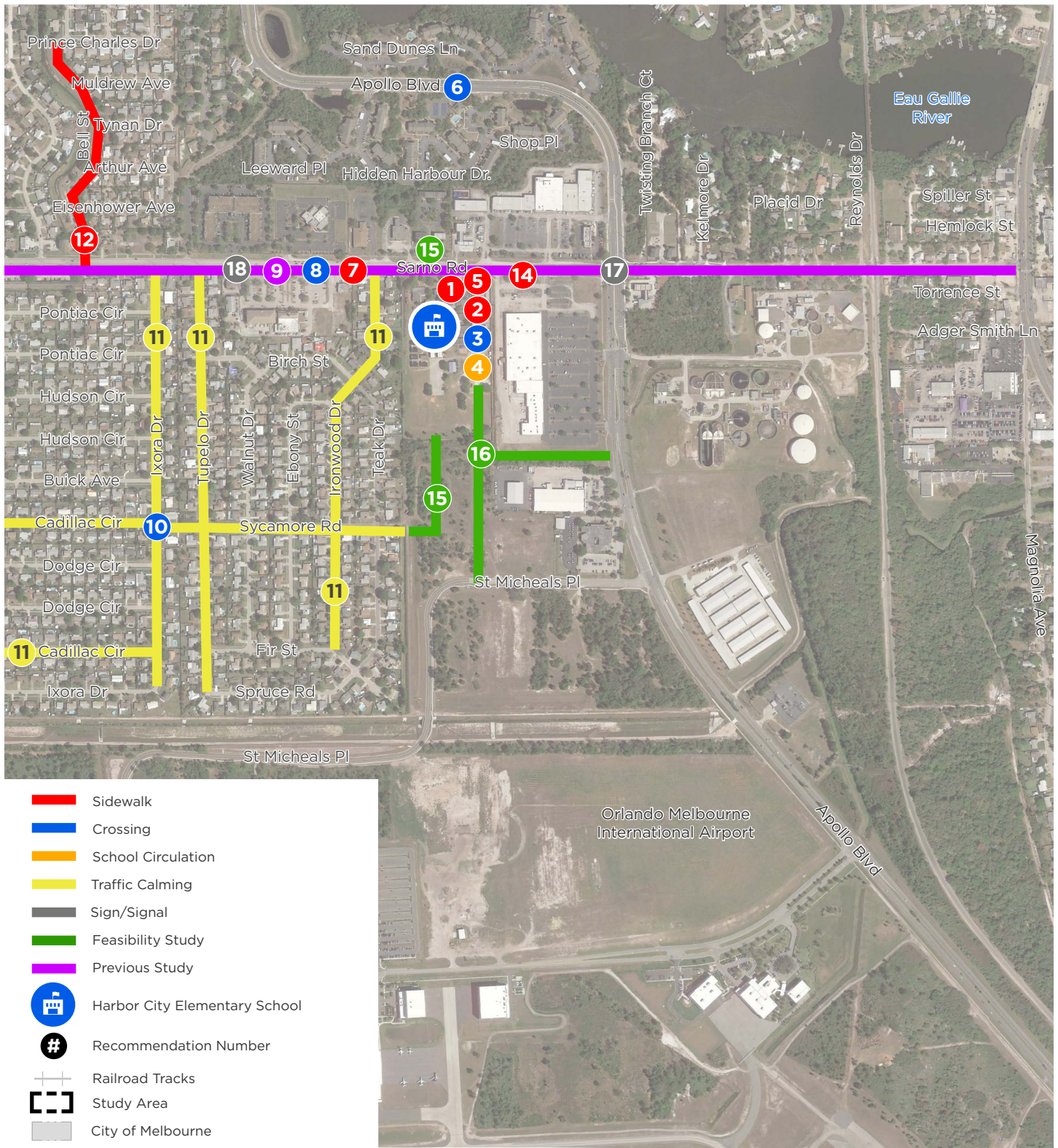


Figure 8: Recommendations School Context Aerial Map

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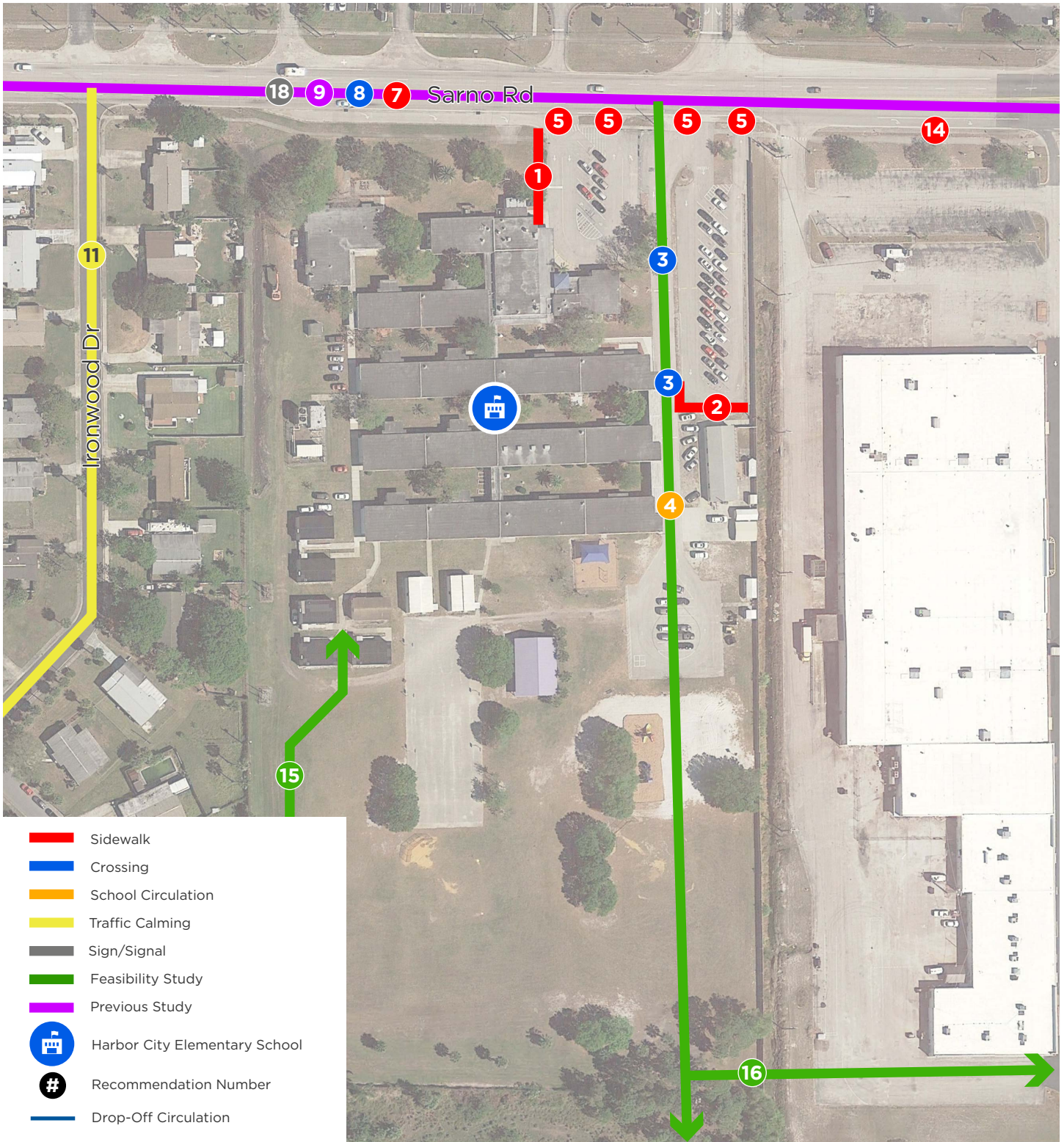


Figure 9: Recommendations School Campus Aerial Map

School Routes Analysis
Harbor City Elementary School

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