

SCHOOL ROUTES ANALYSIS

DR. W.J. CREEL ELEMENTARY SCHOOL

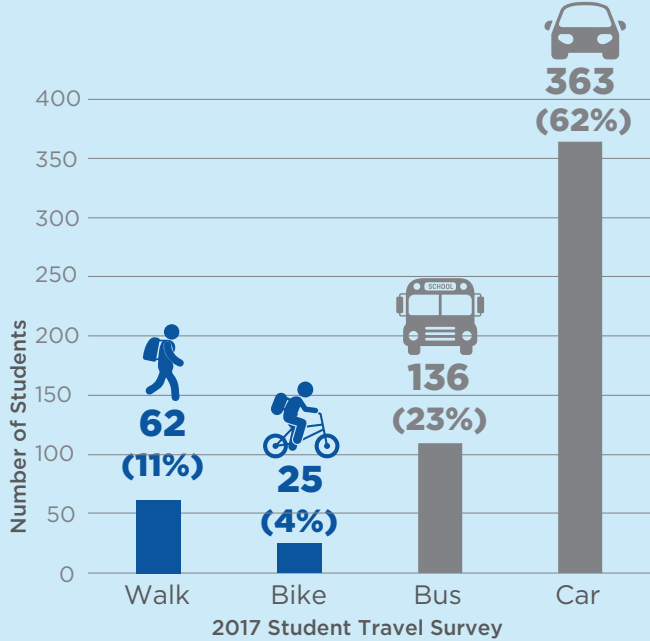


GRAPHICAL SUMMARY REPORT

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

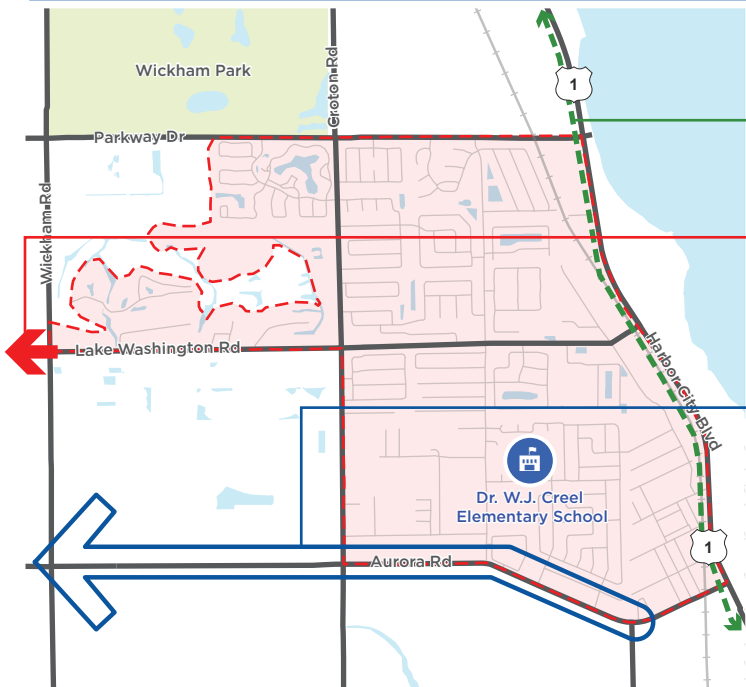
12 Signalized Intersections



6 Unsignalized Marked Crosswalks Across Major Streets



4 Crossing Guards at Lake Washington Rd & Stewart Rd; Stewart Rd and Palmwood Dr; and Glenwood Dr & Palmwood Dr



Previous & Ongoing Plans

Showcase Trails Network

- Trail planned along US 1.

Wickham Road Operational Analysis (2018)

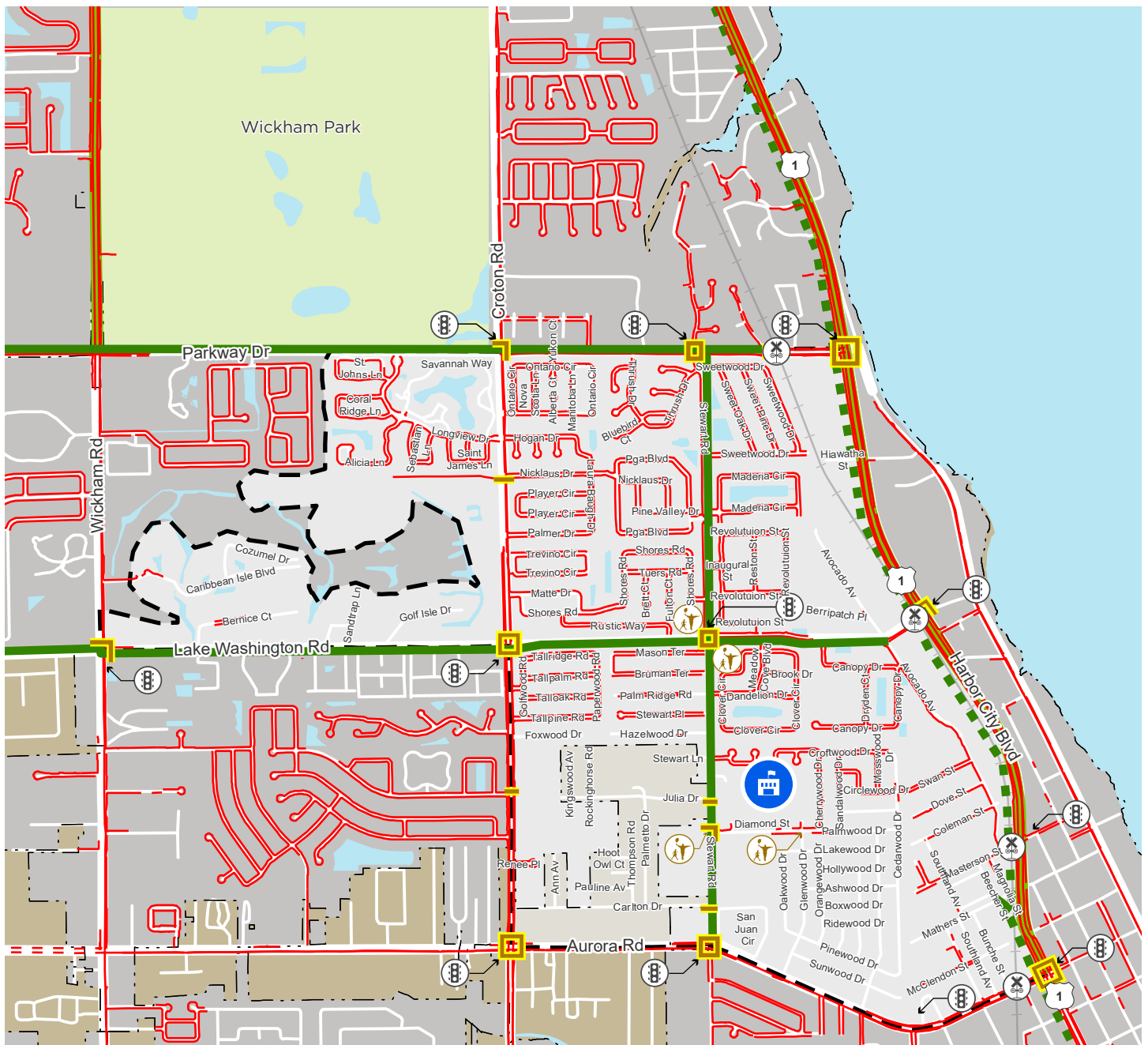
- Lake Washington improvements included turn lane additions/reconfigurations, pedestrian facility upgrades, and crosswalk additions on the west and south legs.

Aurora Road Corridor Study (2018)

- Reconstruct and restripe crosswalks and pedestrian ramps to make them ADA compliant.
- Add bicycle lanes in both directions.
- Widen sidewalk on south side to 6 feet, and add an 8 foot shared use path on north side.
- Add a new two-way center turn lane and reduce through lanes from two in each direction to one.

Figure 1: Background Information

School Routes Analysis
Dr. W.J. Creel Elementary School



- Dr. W.J. Creel Elementary School
- Marked Crosswalks across Major Streets
- Existing Trail / Shared Use Path
- Planned Trail / Shared Use Path
- Existing Sidewalk
- Prioritized Sidewalk (As per Draft Bicycle & Pedestrian Master Plan)
- Existing Bicycle Facilities* (As per Draft Bicycle & Pedestrian Master Plan)
- Prioritized Bicycle Facilities* (As per Draft Bicycle & Pedestrian Master Plan)
- Crossing Guard Location
- Previous Study - Sarno Road Corridor Study
- Traffic Signals within Study Area
- Railroad Crossing Signal within Study Area
- Railroad Tracks
- Study Area
- City of Melbourne
- Unincorporated Brevard County

* Note: Existing Bicycle Facilities include marked bike lanes, buffered bike lanes, 2-way cycle tracks, and ≥5' wide shoulders. Draft Bicycle and Pedestrian Master Plan does not identify specific bicycle facility types for Prioritized Bicycle Facilities.

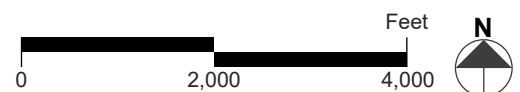


Figure 2: Existing and Planned Bicycle and Pedestrian Facilities



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Dr. W.J. Creel Elementary School

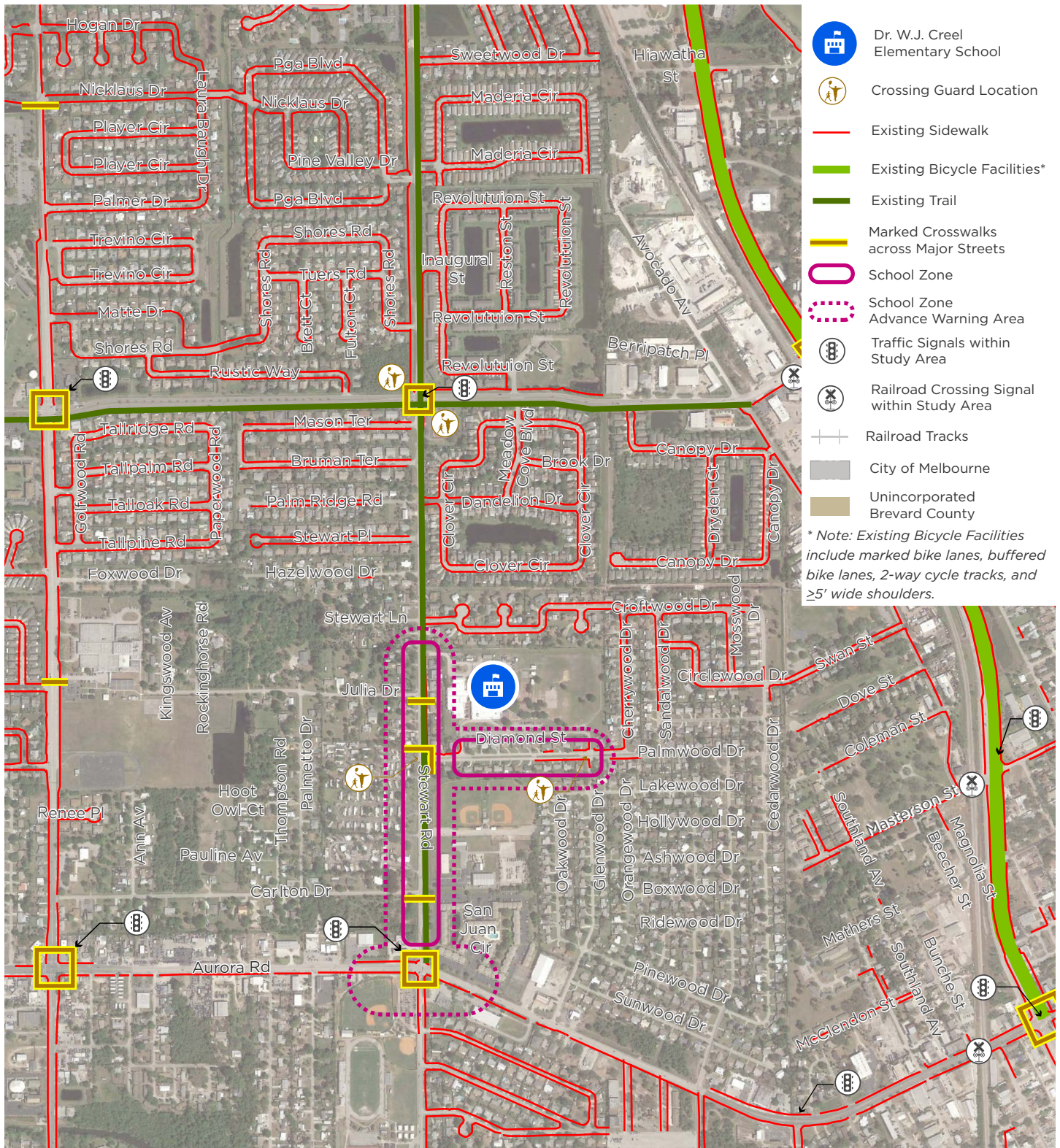
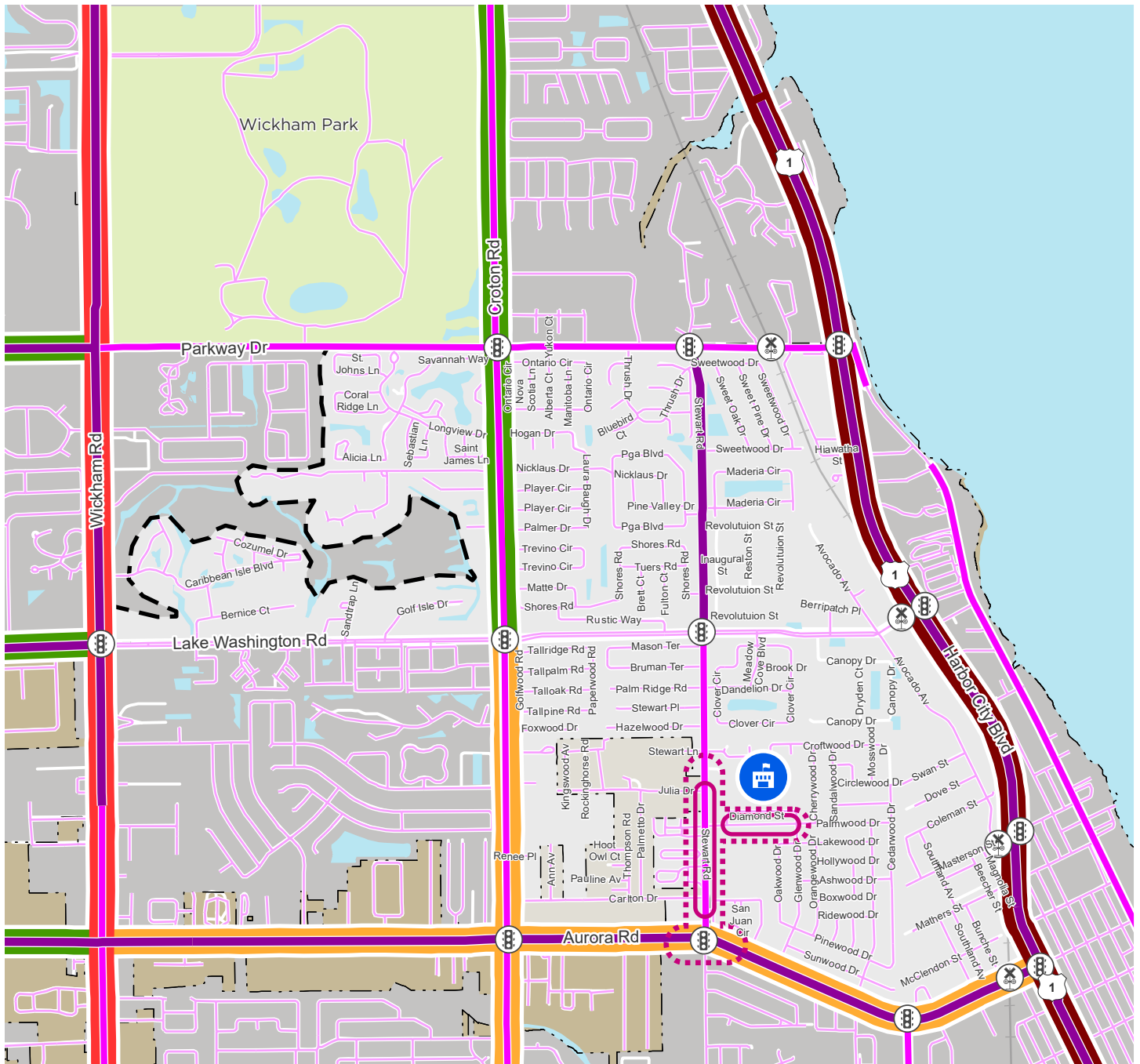


Figure 3: Existing Conditions School Context Aerial Map



Dr. W.J. Creel Elementary School



Railroad Tracks

School Zone

Average Annual Daily Traffic (AADT) (2018)



Traffic Signal within Study Area



Study Area

School Zone Advance Warning Area

Less than 10,000 Vehicles Per Day



Railroad Crossing Signal within Study Area



City of Melbourne

Posted Speed (Miles Per Hour) (2018)

10,001 to 20,000 Vehicles Per Day

25 MPH or Less

20,001 to 40,000 Vehicles Per Day

30 to 35 MPH

40,001 to 80,000 Vehicles Per Day

40 to 45 MPH

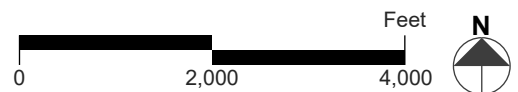


Figure 4: Existing Conditions Traffic Data

School Routes Analysis
Dr. W.J. Creel Elementary School



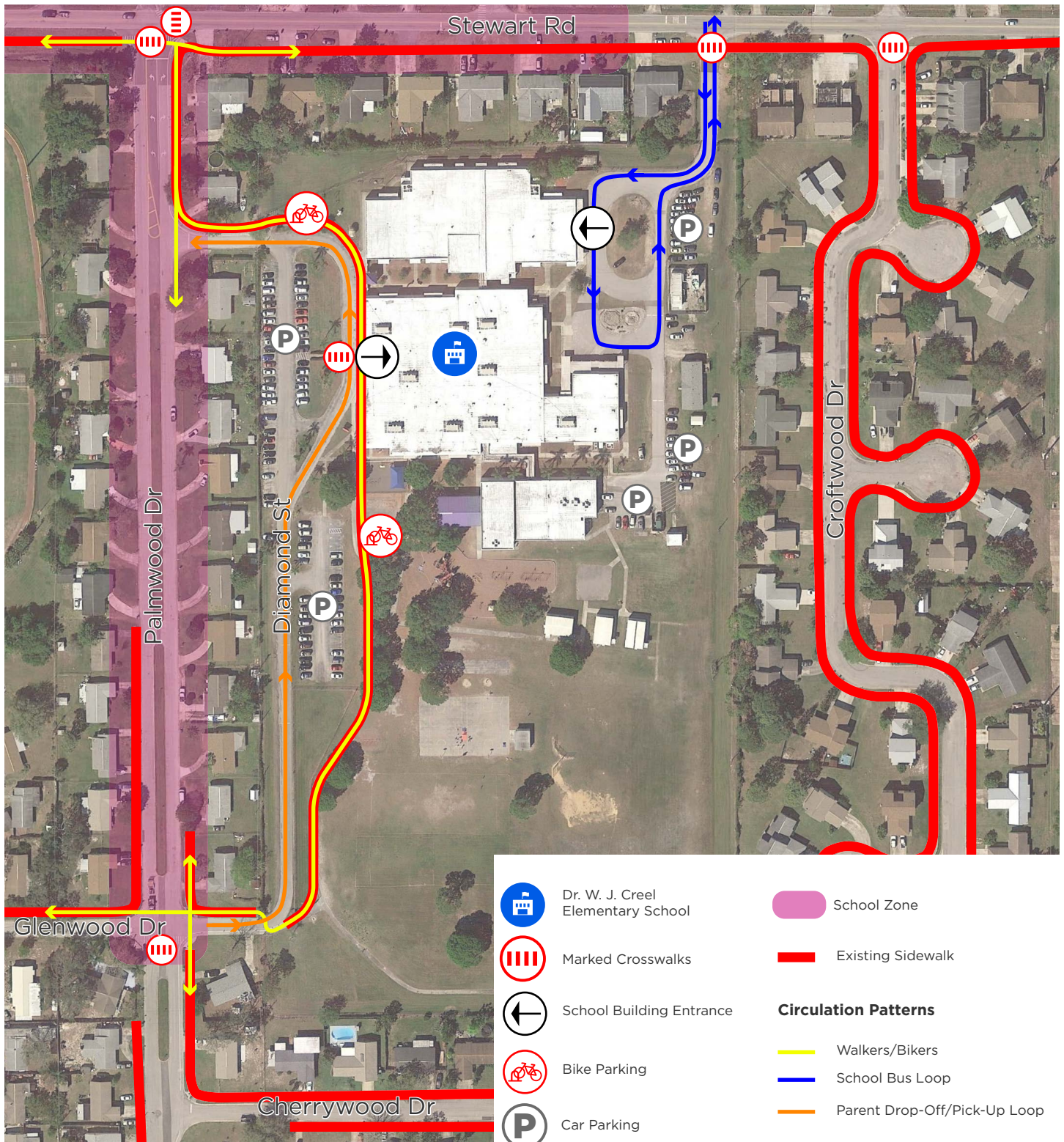


Figure 5: Existing School Circulation Map

School Routes Analysis
Dr. W.J. Creel Elementary School

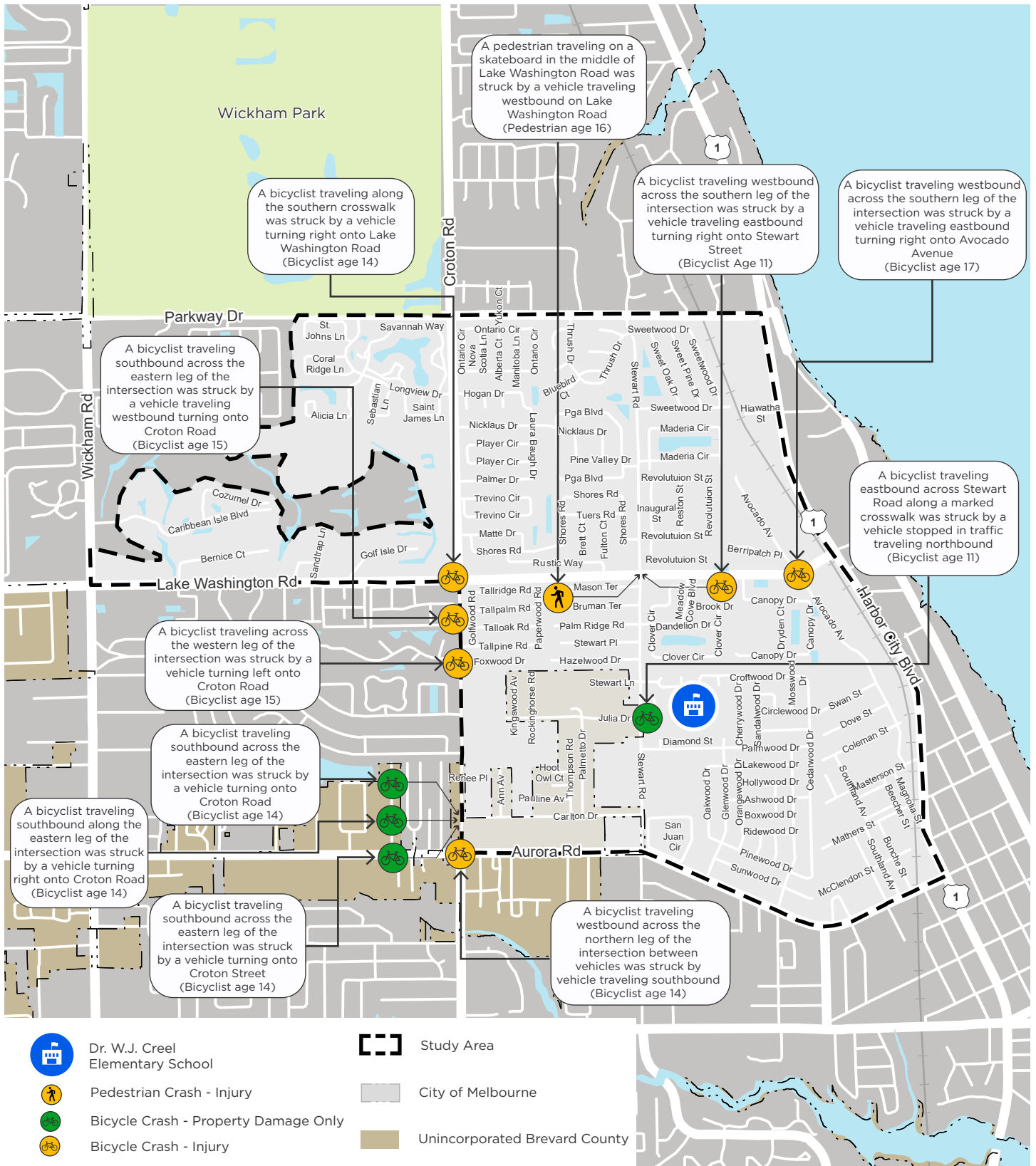


Figure 6: Bicycle and Pedestrian Crashes (2014 - 2018)

School Campus Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
1	School Entrance Driveway	Build an 8 foot wide sidewalk along the east side of the school entrance to the Palmwood Drive/Glenwood Drive intersection.	Sidewalk	Near-Term	\$10,000 to \$15,000
2	Diamond Street	Install new speed humps along Diamond Street.	Traffic Calming	Near-Term	\$30,000 to \$35,000
3	Diamond Street	Install "Do Not Enter" signage along Diamond Street facing west.	School Circulation	Maintenance	\$10,000 to \$15,000
4	Between Surface Parking Lot and Drop-Off/Pick-Up Loop	Restripe the crosswalks to be high-visibility crosswalks from parking lot to the school's main entrance.	Crossing	Near-Term	<\$10,000
5	Parent Drop-Off/Pick-Up Loop	Add pavement for a second travel lane along Diamond Street from the Palmwood Drive/Glenwood Drive intersection to where the paved parking begins on the south side of Diamond Street.	School Circulation	Near-Term	\$265,000 to \$310,000
6	Southeast Corner of School Campus	The school has requested to relocate the existing fencing in the southeast corner of the school property to be moved from the front of the sidewalk (currently adjacent to Diamond Street) to be behind the sidewalk.	Sidewalk	Near-Term	\$25,000 to \$30,000

Recommendations Table

School Routes Analysis

Dr. W.J. Creel Elementary School



Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
7	Stewart Road School Zone	Provide regular police enforcement along Stewart Road north of Aurora Road during school zone times.	Enforcement	Near-Term	Enforcement could be included as part of a regularly scheduled patrol.
8	Stewart Road and Palmwood Drive School Zones	Change the 15 MPH speed zone signage from a static “from X time to X time” to a flashing beacon. Install more school zone signage intermittently along both Stewart Road and Palmwood Drive.	Sign/Signal	Near-Term	\$45,000 to \$55,000
9	Stewart Road and Palmwood Drive Intersection	Build an 8 foot wide sidewalk in the northeast corner where the “cow path” is currently located.	Sidewalk	Near-Term	<\$10,000
10	Stewart Road and Palmwood Drive Intersection	Add an ADA compliant pedestrian landing pad on the northwest corner to provide a waiting area for the marked east-west crosswalk.	Crossing	Near-Term	<\$10,000
11	Palmwood Drive and Glenwood Drive Intersection	Extend the existing median toward the intersection to reduce vehicle turning speeds and reduce the corner curb return radii at the intersection.	Traffic Calming	Near-Term	\$10,000 to \$15,000
12	School Exit Driveway at Palmwood Drive	Reduce the corner curb radii on northeast and northwest corners.	Traffic Calming	Near-Term	<\$10,000
13	School Exit Driveway at Palmwood Drive	Build a channelized raised median in the middle of Palmwood Drive at the school exit driveway to prevent eastbound vehicles along Palmwood Drive from making a left turn into the exit. The channelized median would permit for southbound left from the school exit.	Traffic Calming	Near-Term	\$15,000 to \$20,000

Recommendations Table (Continued)

School Routes Analysis

Dr. W.J. Creel Elementary School



Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
14	Palmwood Drive and Glenwood Drive Intersection	Remove stop sign and stop bar for the southbound movement coming out of the school at Palmwood Drive/Glenwood Drive.	Sign/Signal	Near-Term	<\$10,000
15	Palmwood Drive and Glenwood Drive Intersection	Perform a study to review changing the intersection into an all-way stop control intersection or a roundabout. This would help better control the conflicts between students using the east leg crosswalk and the east/west through movement traffic along Palmwood Drive.	Feasibility Study (Intersection Control)	Near-Term	Further study required
16	Palmwood Drive and Glenwood Drive Intersection	Add a gateway feature for Dr. W.J. Creel Elementary School.	School Circulation	Near-Term	Specific gateway feature elements should be discussed with the School/School Board before an estimate is generated.
17	Palmwood Drive School Zone	Replace the faded "End School Zone" signage along Palmwood Drive.	Sign/Signal	Maintenance	<\$10,000
18	Along the Canal from Swan Street to the Dorcas Outreach Center for Kids (DOCK)	Conduct a feasibility study to add a paved trail connecting Swan Street and the DOCK.	Feasibility Study (Trail)	Near-Term	Further study required
19	Glenwood Drive from Aurora Road to South of Palmwood Drive	Build a 5 to 6 foot wide sidewalk on the west side of the road to connect to existing sidewalk.	Sidewalk	Near-Term	\$125,000 to \$145,000

Recommendations Table (Continued)

School Routes Analysis Dr. W.J. Creel Elementary School



Study Area Recommendations

No.	Location	Recommendation	Type	Time-Frame	Cost Estimate
20	Palmwood Drive from Stewart Road to Cedarwood Drive	Build 5 to 6 foot wide sidewalks to fill gaps on both sides of the road.	Sidewalk	Near-Term	\$235,000 to \$275,000
21	Mosswood Drive from Aurora Road to Palmwood Drive	Build 5 to 6 foot wide sidewalks both sides of the road.	Sidewalk	Near-Term	\$325,000 to \$375,000
22	Cedarwood Drive/ Pinewood Drive from Mosswood Drive to South of Swan Street	Build a 5 to 6 foot wide sidewalk on the south/east side of the road to connect to existing sidewalk.	Sidewalk	Near-Term	\$175,000 to \$205,000
23	Palmwood Drive and Glenwood Drive Intersection	Restripe the east leg crosswalk to be a high-visibility crosswalk. Add a new high-visibility crosswalk on north and south legs and ADA compliant pedestrian ramps on all four corners.	Crossing	Maintenance	\$15,000 to \$20,000
24	Stewart Road and Julia Drive Intersection	Add a 5 to 6 foot wide sidewalk connection and an ADA compliant pedestrian landing pad from the edge of the road to the existing sidewalk on the east side of the road.	Crossing	Near-Term	<\$10,000
25	Stewart Road and Carlton Drive Intersection	Add a 5 to 6 foot wide sidewalk connection and an ADA compliant pedestrian landing pad from the edge of the road to the existing sidewalk on the east side of the road. Add stop bars and 'Stop Here for Pedestrian' signs on the northern and the southern approaches along Stewart Road in advance of the marked crosswalk.	Crossing	Near-Term	<\$10,000
26	Stewart Road from Palmwood Drive to the Northern School Driveway	Widen the existing east side sidewalk from 5 feet to 8 feet.	Sidewalk	Long-Term	\$60,000 to \$70,000

Recommendations Table (Continued)

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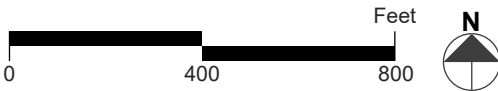


Figure 7: Recommendations School Context Aerial Map

School Routes Analysis

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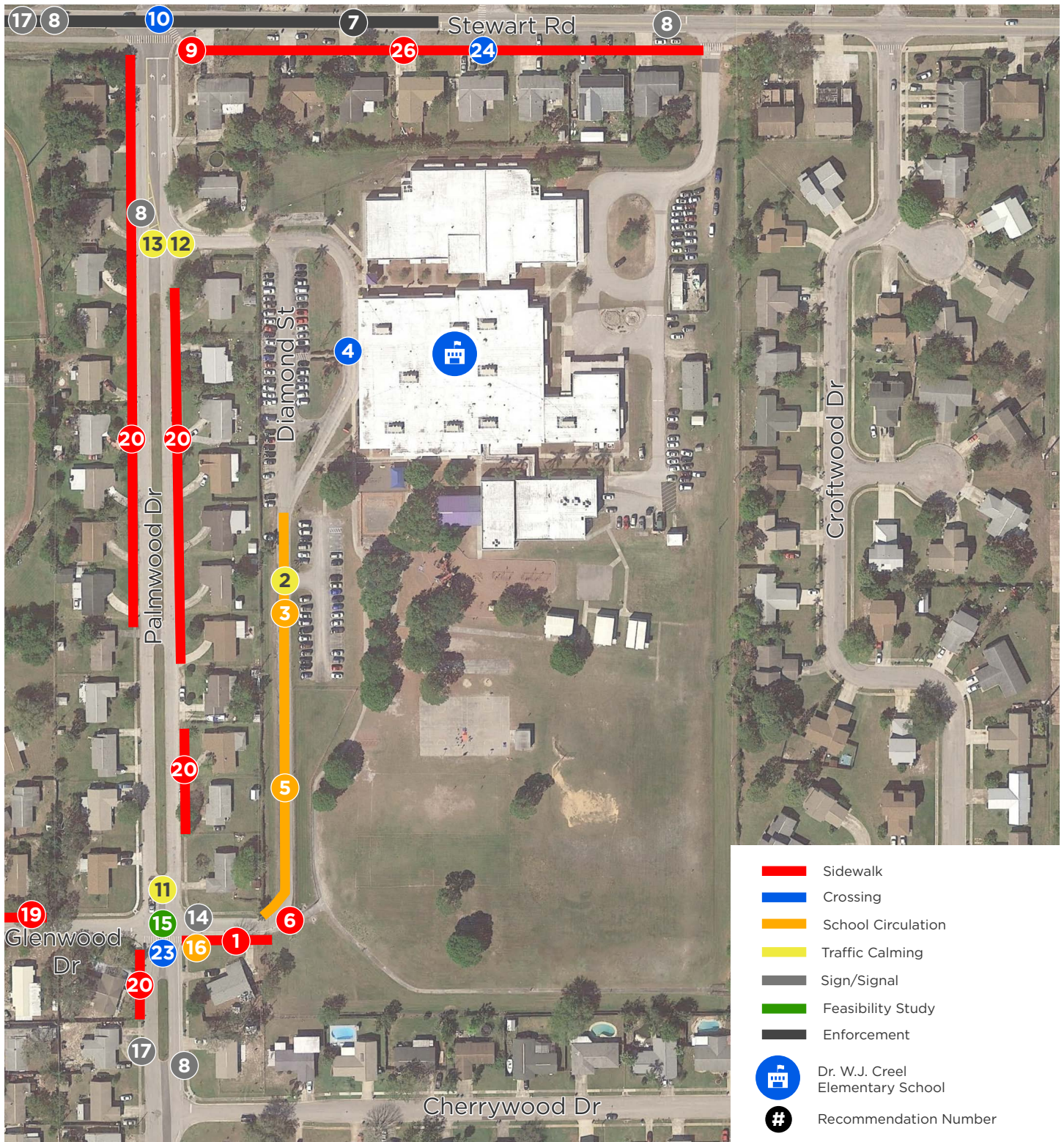


Figure 8: Recommendations School Campus Aerial Map

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