

Volusia County MPO

March 2008



Enterprise Elementary School

Bicycle and Pedestrian Safety Review Study



Introduction

Enterprise Elementary School is located along Main Street in Enterprise, Florida in an established residential area. Deltona Middle School is located within the walk zone of Enterprise Elementary School. Like many other schools in the region, the school experienced a reduction in students this year, down from 725 in 2006 to 661 in 2007.

The DeBary Avenue Bypass is currently under construction and is located north of Enterprise Elementary School. The new roadway is expected to significantly reduce traffic volume on Main Street. The DeBary Avenue Bypass will include a trail on the south side which will connect to the planned East Central Regional Rail Trail.

Most students live outside of the walk zone and are transported by car or bus to school.

Unlike most schools, Enterprise Elementary School currently has an off-site parking lot for student pick-up and drop-off. The parking lot is located on the west side of Main Street and the school campus is located on the east side of Main Street. The crossing guard located at the intersection of Main Street and 3rd Street stated that she typically crosses more than 200 students each morning and afternoon. The School District is working toward a plan to include a drop-off and pick-up area on campus.

There is a designated hazardous conditions area due to the I-4 interchange (shown as a shaded yellow area on the Bicycle and Pedestrian Master Plan).

Upon the completion of the DeBary Avenue Bypass, the safety conditions for students who walk or ride their bicycles to Enterprise Elementary School should be reviewed again.

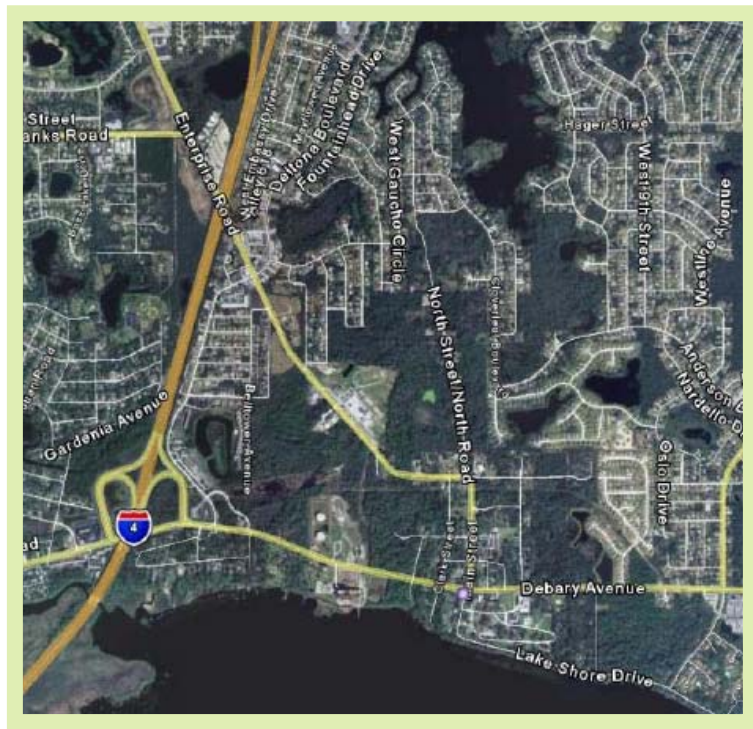


Figure 4.3.1

Enterprise Elementary School – Summary Sheet

School Address: 211 Main Street
Enterprise, FL 32725

School Principal: Dr. Virginia Abernathy
Phone: 386-575-4135
Email: vabernat@volusia.k12.fl.us

Crossing Guard Supervisor: Nancy Strickland
Phone: 386-860-7030
Email: nstrickland@vcso.us

County Representative: Jon Cheney, PE
Phone: 386-736-5968
Email: jcheney@co.volusia.fl.us

School District Representative: Saralee Morrissey, AICP
Phone: 386-736-5968
Email: smorriss@volusia.k12.fl.us

Site Visit Observation Date: September 26, 2007 (weather: cloudy)
October 5, 2007 (weather: clear)

Site Plan: Not Available

School Status: Enterprise Elementary School is the only school studied that has a student pick-up/drop-off area separate from the school site. The students currently cross Main Street to get to and from the pick-up and drop-off area west of the school site. An on-site pick-up and drop-off area is included in plans for campus renovations scheduled for completion in September 2008.

Number of Enrolled Students (2007 data): 661 (725 in 2006)

School Capacity (Planned): Unknown, six portables were added in 2007

Estimated Number of Students Living in Walk Zone: 260

Estimated Number of Walkers/Bicycle Riders Observed: Over 200 students cross Main Street at 3rd Street to and from the student drop-off parking area.

Number of Bicycles on Site: eight

Number of Bicycle Helmets (stored with bicycle): four

Number of Bicycle and Pedestrian Crash Events within the Existing Walk Zone (Elementary Age, During Estimated School Travel Times, 2004-2006): one, near the intersection of Cloverleaf Drive and Fountainhead Drive

Crash Symbol Number	Location	Date	Time	Bicycle or Pedestrian	Age	Light	Road Surface	Vehicle
Enterprise Elementary (72799034)	Cloverleaf Dr. and Fountainhead Dr.	4/12/06	755	Bicycle	12	Day	Dry	Automobile

Number of School Buses: eight

Number of Aftercare Buses/Vans: nine

Votran Route in Walk Zone: Yes, with a stop at Deltona Middle School

Percentage of Title One Students: 56.43%

Estimated Number of Students Attending Breakfast: 300

Number of Students for School Site Aftercare: 100 in afternoon, 10 in morning

Backpack Policy: No policy

Teachers Assisting in Arrival and Dismissal Safety: two at the bus loop in the morning and 11 at the student drop-off site at arrival and dismissal times

Crossing Guard Location: Main Street and 3rd Street

Summary of Principal Comments: Concerned with students crossing Main Street to access off-site student drop-off.

Summary of Crossing Guard Supervisor Comments: The new parking layout and waiting area for the students has improved safety. Blocking traffic to the south side of 3rd Street along Main Street has eliminated the need for the guard to supervise two crossings.

Planned Road, Sidewalk or other Improvements: Debary Avenue Bypass is under construction in this area and will include the alignment of the East Central Regional Rail Trail.

Planned Development: The School District plans to incorporate student drop-off and pick-up parking on the main campus.

Hazardous Conditions (Source: School District Data February 2008, rephrased by Hoke Design, Inc.):

Description- North and south of Dirksen Drive, west of Maple Avenue, east of Mansion Boulevard, and south of Gardenia Avenue (shaded yellow on the Master Plan)

Reason- No four foot flat walk space and no pedestrian feature at I-4.

Findings and Recommendations

Finding: Currently, the student pick-up and drop-off area for Enterprise Elementary School is located off-site on the west side of Main Street. During the time of this Study, this parking area was revised and fencing was added to increase safety and reduce the number of parents crossing Main Street. Access to the west side of 3rd Street was closed to traffic during school arrival and dismissal times. The School District is currently working toward a plan to include the student pick-up/drop-off area on campus.

Recommendation: Continue efforts to provide on-campus student pick-up/drop-off. Design the access to the proposed on-campus parking to avoid conflicts with pedestrians and bicyclists using the Main Street sidewalk.



Students cross Main Street to the student pick-up area where parents wait.



3rd Street is closed during student arrival and dismissal times, eliminating the need for the guard to supervise two crossings at one time

Finding: Parents drop their children off at several points around the school to avoid the car drop-off line. Many parents also park temporarily and escort their children to the school site/classroom.

Recommendation: Continue to educate parents (and their children) of the proper drop-off and pick-up procedures through flyers, and newsletters, especially at the beginning of the year. Consider placing school staff along the front of the school for the first two weeks of the school year.



A motorist picks up a student in front of the School along Main Street

Wearing safety vests will increase their visibility and appearance of authority. Request enforcement through the Volusia County Sheriff's office as needed.

Finding: The asphalt sidewalk on the east side of Main Street is seven feet wide and located adjacent to the roadway. Because this sidewalk is flush to the roadway, it acts as a paved shoulder. The day of the site visit the sidewalk was encroached by vehicles, including a school bus and a car driven by a parent picking up a student from daycare.

Recommendations: The traffic along Main Street may be reduced with the planned opening of the DeBary Avenue Bypass (under construction in early 2008). Budget limitations may make replacement with a separated sidewalk difficult. The following interim measures may help define the trail from the roadway:

- Consider narrowing the vehicular travel lane and providing a painted hatched area indicating a no-cross zone for motorists.
- Provide painted crosswalks at all intersections with driveways. Extend the crosswalk into the trail at the northern entrance to the school site to increase awareness of the trail location.
- Install "no parking" signs along the trail, placed perpendicular to the trail.
- Redefine the eastern edge of the trail by edging the vegetation.
- Repair the asphalt surface where needed.
- Review the possibility of painting the sidewalk with a contrasting color (non-slip).



The asphalt sidewalk is flush to the adjacent roadway along Main Street.



The sidewalk is difficult to distinguish from the roadway.



The bus encroaches on the sidewalk at the bus exit.

Finding: The East Central Regional Rail Trail will be co-located with the DeBary Avenue Bypass and is expected to serve Enterprise Elementary School students and Deltona Middle School students. Enterprise Road will intersect the DeBary Avenue Bypass, with a signal planned for this location.

Recommendation: Consider designing sidewalks to connect with this planned trail. Design intersections to include enhanced pedestrian features and signal timing.

Finding: Enterprise Road has incomplete sidewalks on both sides of the road from Deltona Boulevard to Main Street. Deltona Middle School is located along the northeast side of Enterprise Road.

Recommendation: Completion of the missing sidewalk gaps will greatly enhance the safety for the pedestrians and bicyclists attending Enterprise Elementary School and Deltona Middle School. The County is reviewing the right-of-way conditions along Enterprise Road to determine if the continuation of the sidewalk is feasible. Sidewalk completion along the east and west side of Enterprise Road is detailed further as recommended priority projects at the end of this chapter.



Enterprise Road looking west

Finding: The crossing guard location along Enterprise Road in front of Deltona Middle School is planned for closure. The crossing guard assists both elementary and middle school students and provides a crossing point to connect the two sidewalks.

Recommendation: Maintain this crossing guard location if students are using the guard and are not provided bus transportation. If the sidewalks along Enterprise Road are completed, review this crossing guard location to see if it can be relocated to the intersection of Enterprise Road and the planned DeBary Avenue Bypass. This will allow students to cross at a signalized intersection. The need for a crossing guard should also be reviewed for crossing Main Street at the intersection of the DeBary Avenue Bypass.



The crossing guard location on Enterprise Road near Deltona Middle School

Master Plan

The following Bicycle and Pedestrian Master Plan specifies a network of sidewalks and trails that, if implemented, will greatly increase the convenience and safety of travel for pedestrians and bicyclists. A 24"x36" fold-out map is included as a deliverable with this Study.

The Bicycle and Pedestrian Master Plan includes the following information:

Existing Conditions:

- Existing Walk Zone area from School District GIS (shaded pink)
- Courtesy Transportation Zone from School District, if applicable (shaded blue)
- Hazardous Transportation Zone from School District, if applicable (shaded yellow)
- Existing Trails from County GIS and field review (solid green line)
- Existing Wide Sidewalk 6-8' from field review (solid blue line)
- Existing Sidewalks 3-5' from field review (solid red line)
- Existing Crossing Guard Locations from County GIS and field observations (green cross for existing to remain and yellow cross for existing to be closed)
- Bicycle or Pedestrian Crash Event Locations from 2004-2006 from County GIS data, during estimated school travel times (pink star) and involving an elementary age bicyclist or pedestrian.
- Existing Votran Routes from Volusia County MPO (yellow lines along roadway centerline).

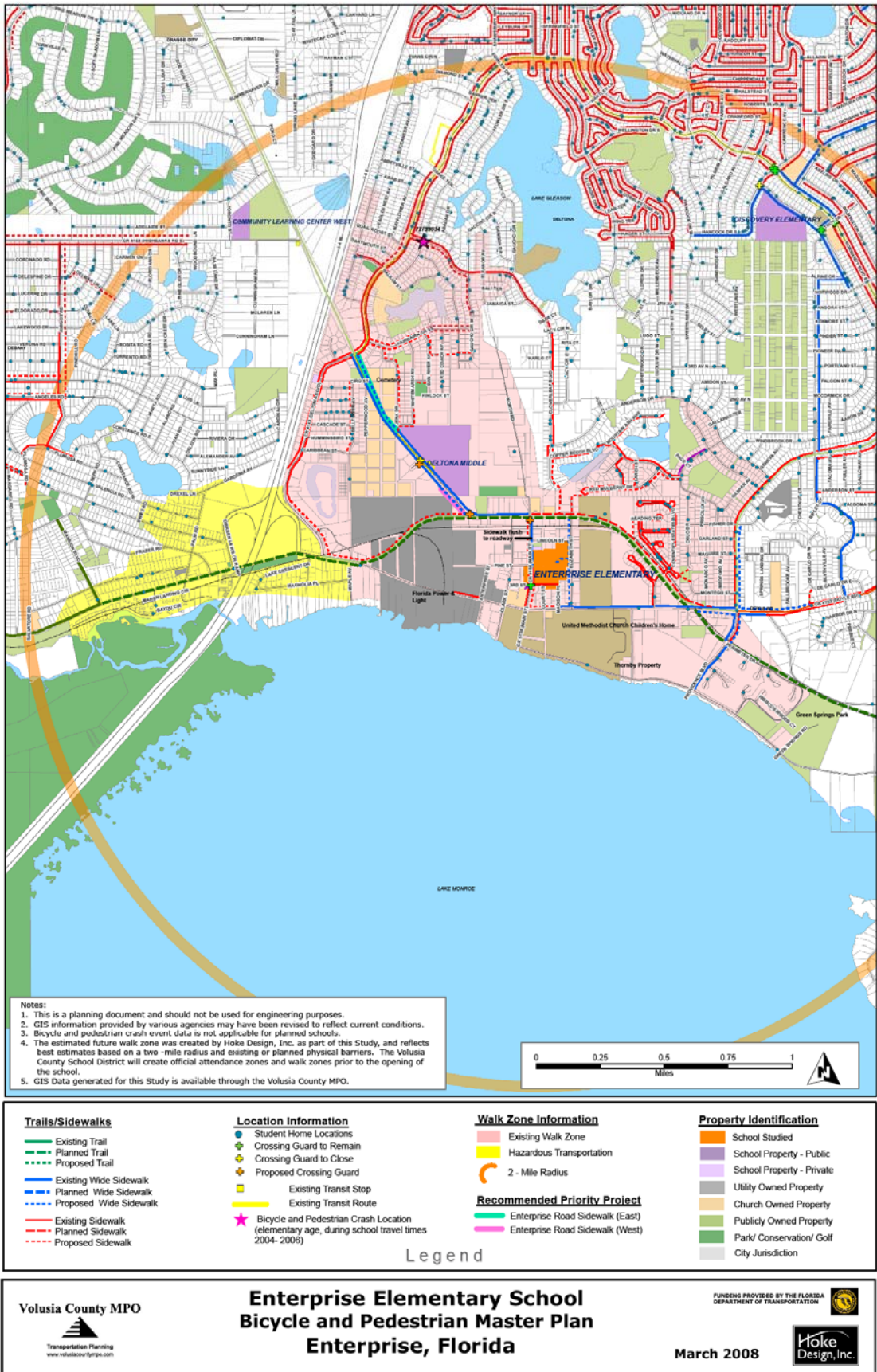
Planned Conditions:

- Planned State of Florida sidewalk and roadway improvements from FDOT website, State or County GIS (medium blue roadway centerline)
- Planned Volusia County sidewalk and roadway improvements from County GIS data (medium green roadway line)
- Planned trail (long dashed dark green line)
- Planned wide sidewalk (long dashed blue line)
- Planned sidewalk (long dashed red line)
- Planned Crossing Guard Location (orange cross)

Recommendations of this Study:

- Proposed Trails (dashed dark green line)
- Proposed Sidewalks 6-8' wide (dashed blue line)
- Proposed Sidewalks 5' (dashed red line)
- Proposed Crossing Guard Locations (orange cross)
- Recommended Priority Projects (blue highlight, pink highlight)

This Master Plan and supplemental information supplied within the Implementation Report are meant as a guideline for sidewalk and trail planning. The Master Plan is not an engineering document.



Recommended Priority Projects

Enterprise Road Sidewalk (East)

Project Location: The east side of Enterprise Road from Deltona Boulevard to Jena Drive

Project Description: 8' wide concrete sidewalk, 1800 linear feet

Estimated Cost: \$261,000 (\$145/LF) (not including right of way acquisition, if required)

Schools Served: Enterprise Elementary School and Deltona Middle School

Maintaining Agency: Volusia County

Bicycle and Pedestrian Crash Event Location: There was a crash involving a school aged bicyclist near the intersection of Cloverleaf Drive and Fountainhead Drive at the northern limits of existing walk zone.

Finding: Students living east of Enterprise Road and north of Deltona Middle School do not have a continuous sidewalk route to and from school.

Recommendation: Construct an 8' wide concrete sidewalk from Deltona Boulevard to Jena Drive, connecting to the existing wide sidewalk that terminates at Jena Drive.

Potential Constraint: The right of way may be limited, especially toward the intersection of Deltona Boulevard where a turn lane reduces available right of way. If construction is not feasible along Enterprise Road in this location, a sidewalk along the east side of Jena Drive from Enterprise Road to South Fairbairn Drive would provide a connection to the neighborhood to the north of Deltona Middle School.



A wide sidewalk ends at Jena Drive along the east side of Enterprise Road.



A turn lane at Deltona Boulevard reduces available right of way along the east side of Enterprise Road.



Enterprise Road looking north (near the cemetery)

Enterprise Road Sidewalk (West Side)

Project Location: The west side of Enterprise Road across from Deltona Middle School to the planned intersection with the DeBary Avenue Bypass and Enterprise Road

Project Description: 8' wide concrete sidewalk, 1200 linear feet

Estimated Cost: \$174,000 (\$145/LF) (not including right of way acquisition, if required)

Schools Served: Enterprise Elementary School and Deltona Middle School

Maintaining Agency: Volusia County

Finding: Students living west of Enterprise Road and south of Deltona Middle School do not have a continuous sidewalk route to and from school. The construction of the DeBary Avenue Bypass will include a signalized intersection where Enterprise Road intersects with the DeBary Avenue Bypass. A wide sidewalk will be constructed along the south side of the DeBary Avenue Bypass.

Recommendation: The continuation of the existing wide sidewalk along the west side of Enterprise Road will provide a sidewalk connection to the planned signalized intersection of Enterprise Road and DeBary Avenue Bypass. The completion of this sidewalk would allow students to cross the DeBary Avenue Bypass at the signalized intersection with a crossing guard (proposed by this Study) to the west side of Enterprise Road. Students living west of Enterprise Road will also be required to cross Main Street where it intersects with the DeBary Avenue Bypass. A crossing guard for this location should be reviewed after the completion of the DeBary Avenue Bypass.



Students walk along the west side of Enterprise Road where the proposed sidewalk would be located.