

**Volusia County
MPO**

June 2009



**Ortona Elementary School
Bicycle and Pedestrian School Safety Review Study
Phase 3C**



Volusia County MPO



Transportation
Planning

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School Summary

Ortona Elementary School is located within the City of Daytona Beach, south of Seabreeze High School. Of the 286 students attending this school, 182 live within the designated walk zone area. During the observation day for this school, approximately 57 students walked or rode bicycles to or from school. No students wore helmets to school.

Congestion along Grandview Avenue due to the co-location of the bus loading area and the student pick-up / drop-off area is the primary concern for pedestrians and bicyclists attending this school. A middle school bus stop is located at the intersection of Golf Boulevard and Grandview Avenue and adds to overall congestion during school arrival. The School District's plans to expand and improve parking and circulation in front of the school are ongoing.

Recent reductions in the crossing guard program resulted in closure of two crossing guard locations. The first location was near the bus loading area along Grandview Avenue at the intersection of Bel Aire Drive. The second location was at University Boulevard and Peninsula Drive.

Two students were observed crossing S.R. A1A at Golf Boulevard as they travelled to and from school. An additional five students crossed S.R. A1A to reach the Votran bus stop located on the east side of the road.

There are no Priority Projects recommended for this school other than school campus circulation improvements.



Ortona Elementary School – Summary Sheet

School Address: 1265 North Grandview Avenue
Daytona Beach, Florida 32118

School Principal: Juanita Collins
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Volusia County School District Representative: Saralee Morrissey, AICP
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Volusia County MPO: Stephan Harris, Bicycle and Pedestrian Coordinator
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Consultant Representative: Ginger Hoke, RLA, Hoke Design, Inc.
Phone: 407-923-6027
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Site Visit Observation Date: December 17, 2008 (weather: very foggy in the morning and clear in the afternoon)

Meeting Attendees:

- Juanita Collins
- Michael Marcum
- Stephan Harris
- Ginger Hoke

Number of Enrolled Students (2008/2009 data): 286

Estimated Number of Students Living in Walk Zone: 182

Number of School Buses: 3 (one bus has only one student)

Number of Aftercare Buses/Vans: 1

Estimated Number of Walkers/Bicycle Riders: 57

Number of Bicycles on Site: 8 bicycles, one scooter

Number of Bicycle Helmets (stored with bicycle): 0

Staggered Student Dismissal: no

Estimated Number of Students Attending Breakfast: 105 (breakfast starts at 7:20)

Number of Students for School Site Aftercare: 66-86

Teachers Assisting in Arrival and Dismissal Safety:

Arrival: 2 **Dismissal:** 2

Title One School: (2008/2009): Yes, 69%

Backpack Policy: No

Bicycle/Pedestrian Safety Education Programs: No

Summary of Principal Comments:

- Vehicular and pedestrian conflict

Number of Bicycle/Pedestrian Crash Events within the Existing Walk Zone (elementary age, during estimated school travel times, 2005-2007): 0

Planned Road, Sidewalk, or other Improvements:

- Sidewalk construction is ongoing on Bel Aire Drive
- Sidewalk improvements along S.R. A1A are ongoing
- Resurfacing on Halifax Avenue
- Plans to expand and improve parking traffic circulation are ongoing

Planned Stimulus Recovery Project:

- Resurfacing of Plaza Boulevard (Halifax Avenue to Atlantic Avenue)

Planned Development in Walk Zone: No

City use of GIS: Yes

Number of Students Transported (Designated as Hazardous): 0

Votran Route in Walk Zone: Yes, along SR A1A (used by 5 students on observation day) and Halifax Avenue (used by one student on observation day)

Findings and Recommendations

Circulation Description: Ortona Elementary School is located in Daytona Beach between Halifax Avenue and Grandview Avenue, with primary access located along Grandview Avenue. The bus loading area is located on the west side of Grandview Avenue across from the intersection of Bel Aire Drive. The primary student drop-off and pick-up area is co-located with the bus loading area. Additional student pick-up and drop-off locations are in front of the office (off of Grandview Avenue) and to the rear of the school.

Recent budget reductions resulted in the closing of the crossing guard locations at Bel Aire Drive and Grandview Avenue and University Boulevard and Peninsula Drive.

Students who walk or bicycle to and from school use the sidewalk on the west side of Grandview Avenue or share the street with the vehicles and buses. Pedestrians and bicyclists cross Grandview Avenue in front of the bus loading area to reach parked vehicles or to use the new sidewalk on Bel Aire Drive. The School District plans to expand and improve the parking area in front of the school.

Findings: Buses reduce the southbound lane width and motorists take turns passing through this area. Motorists park along the east and west side of Grandview Avenue; some motorists parked heading the wrong direction in front of the buses.

The rear access to the school from Halifax Avenue has a turning radius that may be difficult for buses to maneuver. A dirt access road leads to a large dirt parking area for the school and the Ortona Play Park. A sidewalk connects the rear of the school to the dirt parking lot.

Previous attempts by school staff to re-locate student drop-off and pick-up to the rear of the school were met with significant resistance.

Recommendations: The School District may wish to consider a multi-faceted approach to reduce traffic congestion along Grandview Avenue. Since there are only two or three buses, the School District may wish to consider relocating the bus loading



Motorists maneuver past the bus loading area on Grandview Avenue



A large unpaved area exists behind the school



The existing sidewalk ends at the parking area behind the school

area to the rear of the school. Bus drivers may be required to enter and exit south on Halifax Avenue to maneuver the angle of the entrance drive. Additionally, if staff parking is relocated to the rear of the school, the front parking area could be used by school visitors and congestion along Grandview Avenue may be reduced.

In addition, the possibility of creating one-way traffic along Grandview Avenue and linking parking areas in front of the school to extend student loading areas should be reviewed. The following Findings and Recommendations further describe these options.



Motorists pick up students near the bus loading area on Grandview Avenue

Findings: The School District plans to expand and improve on-site parking and circulation in front of the school. Bicyclists and pedestrians exiting the service area onto Grandview Avenue use the sidewalk and the road for travel. The location of the middle school bus stop at the intersection of Grandview Avenue and Golf Boulevard creates additional bicycle, pedestrian and motorist congestion near the bus loading zone during school arrival.

Car doors from the informal drop-off/pick-up line open into the sidewalk area where students walk or ride bicycles.

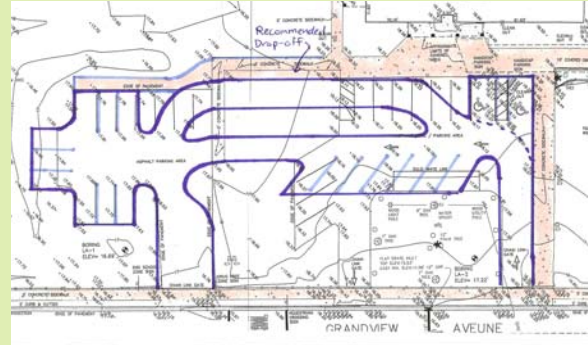


Figure 3.4.1 Sketch of recommended circulation layout

Recommendations: The School District may wish to work with the City to eliminate temporary parking along Grandview Avenue. A transportation engineer should review the possibility of creating a one-way traffic flow along Grandview Avenue, possibly limited to arrival and dismissal times.

The School District may also consider connecting the two front parking areas with a one-way dirt or paved connection to provide an expanded circulation loop (see Figure 3.4.1).



The staff parking lot could connect to the parking area in front of the school to create a drop-off area

Finding: The staff parking area located south of the office parking lot was locked in the afternoon, preventing motorists from using this area for temporary parking at dismissal time.

Recommendation: If possible, relocate staff parking to the rear of the school. As an interim measure, open the gates to the staff parking area and encourage use of this lot for overflow parking.



The gate to the staff parking area is locked at dismissal time

Findings: Students cross Grandview Avenue at the intersection of Bel Aire Drive without a crossing guard. School staff assists with crossing students who are not escorted by an adult. Recent crosswalk signing and striping has most likely increased motorists' awareness of this crossing.

The newly painted crosswalk over Grandview Avenue does not directly connect to the new curb ramp in the sidewalk. There are no direct curb ramps on either side of Grandview Avenue to provide a barrier-free route across Grandview Avenue.

Recommendations: Measures to reduce congestion and vehicular conflict on Grandview Avenue would increase safety for students crossing this road.

Provide a direct crosswalk from the Bel Aire Drive sidewalk to the sidewalk along Grandview Avenue and add direct curb ramps to both sides.



Pedestrians cross between vehicles at the intersection of Grandview Avenue and Bel Aire Drive



The crosswalk over Grandview Avenue does not directly connect to the curb ramp on Bel Aire Drive

Finding: The school bicycle rack is located near the cafeteria and is accessed through the service entrance drive near the bus loading zone. There is no sidewalk connection between the bicycle rack and the sidewalk along the west side Grandview Avenue.

Recommendation: Consider providing a sidewalk connection to the bicycle area and include a concrete pad for the bicycle racks.



The bicycle rack is accessed through the service area drive near the cafeteria

Finding: The sidewalk near the office connects to the external sidewalk on Grandview Avenue but is not flush-to-grade.

Recommendation: The School District plans to expand and improve the parking area in front of the school. Plans show accessible sidewalk connections. If project implementation is postponed or cancelled, the School District should taper the existing sidewalk to provide a flush to grade connection.



The school sidewalk does not meet the Grandview Avenue sidewalk flush to grade

Findings: The newly constructed sidewalk on Bel Aire Drive terminates near the intersection of Wild Olive Avenue. The sidewalk does not connect to the existing sidewalk on the east side of Wild Olive Avenue. Additionally, the sidewalk terminates into the roadway.

Recommendation: Construct a 5 foot wide sidewalk approximately 175 feet long from the end of the sidewalk at Bel Aire Drive to the existing sidewalk along the east side of Wild Olive Avenue. Relocate the stop bar and sidewalk ramp to provide a more direct crossing over Wild Olive Avenue.



The sidewalk along Bel Aire Drive does not quite connect to the existing sidewalk on Wild Olive Avenue

Finding: There is a short gap in the sidewalk on the south side of Golf Boulevard at the east side of the intersection with Grandview Avenue.

Recommendation: Construct a 5 foot wide sidewalk to connect the crosswalk over Golf Boulevard to the existing sidewalk along the south side of Golf Boulevard.



There is a short section of sidewalk missing on the south side of Golf Boulevard east of Grandview Avenue

Findings: There is no sidewalk along the east side of Grandview Avenue from Flagstone Drive to Manhattan Avenue. The right of way north of Golf Boulevard includes a steeply angled driveway that prevents sidewalk construction in this area.

Recommendation: Future sidewalk improvements along Grandview Avenue should include a wider sidewalk on the west side of the road from the school to Golf Boulevard. Curb ramps should be constructed along the full width of the sidewalk.



Grandview Avenue looking north from Golf Boulevard



A steeply angled driveway prevents a continuous sidewalk in this area

Finding: There are no sidewalks along Flagstone Drive from Driftwood Avenue to Bel Aire Drive. The roadway is wide and appears to use most of the available right of way.

Recommendation: The City should consider providing sidewalks along Flagstone Drive from Driftwood to Bel Aire Drive. As an interim measure, painted shoulders or bike lanes should be added to provide a designated area for bicyclists and pedestrians.



Flagstone Drive looking north

Finding: The new sidewalk along the west side of S.R. A1A includes some curb ramps that do not meet current A.D.A. guidelines. The truncated dome tactile strip is incorrectly placed within the ramp.

Recommendation: Relocate the strip to the bottom of the ramp (See Appendix H).



The truncated dome tactile strip is placed incorrectly within the curb ramp

Findings: Several students were observed crossing S.R. A1A at Golf Boulevard. One student crossed without adult supervision and five students crossed with adults. The group of five students crossed S.R. A1A to reach the Votran bus stop location on the east side of the road. Another student crossed S.R. A1A at Pelican Avenue. There are no signalized crossings along S.R. A1A north of Driftwood Avenue within the walk zone. There is a marked crosswalk over S.R. A1A on the north and south side of Driftwood Avenue.

Students crossing S.R. A1A to reach the Votran bus stop location appear to do so to shorten their bus travel time. A Votran bus stop is located along Halifax Avenue at the rear of the school. This bus stop location may create a lengthy trip for students who live north of Ortona Elementary School and use Votran.



Students are escorted across S.R. A1A on their way to the Votran bus stop

Recommendations: The possibility of adding a pedestrian signal and crosswalk at Golf Boulevard and S.R. A1A should be reviewed. Budget limitations have reduced the availability of crossing guards for all schools. If the crossing guard program is expanded in the future, a location at the intersection of S.R. A1A and Golf Boulevard should be considered if students are living east of S.R. A1A. Alternatively, students living east of S.R. A1A should be reviewed for hazardous transportation designation.

Finding: A fire hydrant is located at the top of the new curb ramp at the intersection of S.R. A1A and Golf Boulevard and the sidewalk is very narrow at the radius. This may create problems for people using wheelchairs or strollers or visually impaired pedestrians.

Recommendation: The sidewalk and curb ramp at the intersection of S.R. A1A and Golf Boulevard should be modified to meet current ADA standards (See Appendix H).



A fire hydrant is located at the top of the curb ramp at S.R. A1A and Golf Boulevard

Findings: Motorists park in the “No Parking” area along University Boulevard at the intersection of Peninsula Drive. This intersection was previously staffed with a crossing guard and a crosswalk over University Boulevard still exists. Visibility for motorists using University Boulevard or students using the crosswalk may be reduced by vehicles parked in this area.

Recommendations: The City of Daytona Beach should increase enforcement measures. The City should also stripe the paved area to indicate a no-parking zone. Removal of asphalt, a raised curb or bollards may also be needed to prevent motorists from parking near the crosswalk.



A vehicle parks near a closed crossing guard location at the intersection of University Boulevard and Peninsula Drive

Finding: Many sidewalks within the walk zone terminate into drainage grates where sidewalks meet at road intersections.

Recommendation: Provide sidewalk connections that continue the sidewalk alignment. As an interim measure, replace the existing grates with a grate that will not catch or stop bicycles, strollers or wheelchairs.



Williams Avenue and Oleander Avenue

Finding: Many sidewalks within the school walk zone do not have accessible curb ramps at roadway intersections. In most cases, the grass area adjacent to the sidewalk provides access to the street.

Recommendation: Due to budget limitations, the City may wish to create a continuous accessible route on at least one side of Wild Olive Avenue to provide a continuous north-south route between University Boulevard and Seabreeze Boulevard. If possible, the sidewalk along the west side of Grandview Avenue should also be modified to create a continuous accessible route between Pelican Avenue and Golf Boulevard.



The sidewalk at the intersection of Grandview Avenue and Riverview Boulevard does not have curb ramps

Findings: There are no sidewalks along the west side of Oleander Avenue from Harvard Drive to Boylston Avenue. The walking conditions between Plaza Boulevard and Auburn Drive may be difficult for students due to the numerous parking lots located directly adjacent to the roadway. Curb stops used to define parking areas may create obstacles for pedestrians, bicyclists and wheelchair users.

Recommendations: If right of way is available, the City should work with the property owners to redesign parking to construct a sidewalk. At a minimum, increase pedestrian safety on the west side of Oleander Avenue by clearing obstacles from the walk area.



Curb stops are located along the west side of Oleander Avenue

Findings: Stones placed in the right of way obstruct the right of way for pedestrians and bicyclists. This may be a particular safety issue for students traveling to school in the dark.

Vegetation encroaches into the sidewalk surface along a few sidewalks and may force sidewalk users into the roadway.

Recommendation: The City of Daytona Beach should review rights of way in the school walk zone for unsafe obstructions. Obstructions considered a potential safety issue for bicyclists or pedestrians should be removed.



Stones placed in the right of way may create a safety issue for pedestrians or bicyclists



Vegetation blocks the sidewalk along Seaview Avenue near Halifax Avenue

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 Bicycle and Pedestrian Master Plan is included as a deliverable with this Study.

The Master Plan includes the following information:

Existing Conditions:

- Existing Walk Zone area from School District GIS (shaded tan)
- Student Home Locations from School District (dark blue dot)
- 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)
- Recently closed Crossing Guard Locations from County GIS (yellow cross)
- Bicycle or Pedestrian Crash Event Locations from 2005-2007 from County GIS data, during estimated school travel times and involving an elementary age bicyclist or pedestrian (pink star).
- Existing Votran Routes and stops from Volusia County MPO (yellow lines along roadway centerline with yellow squares at bus stops).

Planned Conditions:

- Planned trail (long dashed dark green line)
- Planned wide sidewalk (long dashed blue line)
- Planned sidewalk (long dashed red line)

Recommendations of this Study:

- Proposed Trails (dashed dark green line)
- Proposed Sidewalks 6-8' wide (dashed blue line)
- Proposed Sidewalks 5' (dashed red line)

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.

