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Introduction

Hardee County is located in Central Florida, within the twelve County region in District One of the Florida Department of Transportation (FDOT). Hardee County is a rural County, bound by Polk County to the north, Highlands County to the east, DeSoto County on the south, and Manatee County to the west. Figure 1 illustrates the Hardee County area. The major industries for the County are citrus, phosphate mining, vegetable farming, and cattle. The County’s municipalities are the City of Wauchula, the City of Bowling Green, and the Town of Zolfo Springs. Hardee County has a 2012 population of 27,514 according to the US Census Bureau, and the County seat, Wauchula, is the largest municipality with a population of 4,929 (US Census Bureau).

Purpose

The purpose of this Hardee County Bicycle and Pedestrian Master Plan (hereafter: “Master Plan”) is to facilitate the identification and implementation of the projects that aim to provide a safe, accessible, and well-connected bicycle/pedestrian network that will enhance the non-motorized commute within unincorporated Hardee County, the Cities of Bowling Green and Wauchula, and the Town of Zolfo Springs. The development of this plan was conducted through extensive coordination between the Florida Department of Transportation (FDOT), Hardee County, the cities of Bowling Green and Wauchula, the Town of Zolfo Springs, and the Hardee County School Board. The intent of this document is to provide the following information:

- An inventory and assessment of the existing bicycle and pedestrian facilities within the limits of Hardee County;
- Programmed network improvements including bicycle lanes, shared lane marking, sidewalks, intersection improvements and roadway capacity improvements;
- Analysis of crash data using a three year period of countywide crash data from August 2008 to September 2011, inclusive; and
• Recommendation of bicycle lanes, sidewalk improvements and intersection improvements in accordance with the guidelines of the Americans with Disabilities Act (ADA).
Data Collection, Inventory and Review

An inventory of the existing bicycle and pedestrian facilities within the County provides data that allows stakeholders to identify opportunities for improvements and the knowledge to prioritize projects. A geodatabase was developed to provide an inventory of existing bicycle and pedestrian facilities, but not limited to, roadway networks, maintaining jurisdictions, number of lanes, speed limits, sidewalks and designated/un-designated bicycle lanes, width of sidewalk and bicycle lane facilities. This geodatabase will aid in determining the existing deficiencies in the bicycle and pedestrian facilities, recommending future improvements, and establishing minimum criteria for bicycle and pedestrian facility types. State, County, and local jurisdictions were used as a source for any available GIS data for Hardee County, including the Cities of Bowling Green, Wauchula, and the Town of Zolfo Springs.

The data provided by the State, County and the Cities/Towns jurisdiction was updated and verified with FDOT Roadway Characteristics Inventory (RCI) Database, FDOT Straight Line Diagrams (SLD), FDOT Video Logs, Google's Aerial Images and Street View, the and United States Geological Survey (USGS) Earth Explorer tool, as well as field visits.

Roadway characteristic information, including posted speed limits, number of lanes, functional classification, maintaining jurisdiction, the presence of sidewalk and designated/un-designated bicycle lane facilities, and information showing whether they are signed and striped, were obtained for all the State and County maintained roadway facilities within unincorporated Hardee County, the Cities of Wauchula and Bowling Green, and the Town of Zolfo Springs. This also included arterials and collectors within a half mile radius of all educational facilities/schools.

In addition, the existing goals and policies pertaining to bicycle and pedestrians facilities adopted by Hardee County, the Cities of Wauchula and Bowling Green, and the Town of Zolfo Springs from their respective Comprehensive Plans were reviewed.

Note: Geodatabase is a common data storage and management framework for Geographical Information System (GIS). It combines "geo" (spatial data) with "database" (data repository) to create a central data repository for spatial data storage and management.
Bicycle and Pedestrian, Attractors and Generators

Bicycle and Pedestrian trip attractors and generators within Hardee County study area were examined. This includes facilities that support and enhance bicycle and pedestrian mobility. The following are key areas considered within this Study:

- Trails, parks, and recreational areas – Figure 2
- Medical care facilities (hospitals, clinics, retirement communities, skilled nursing and/or assisted living facilities) – Figure 3
- School zones and school types – Figures 4A – 4D
- Public Airports – Figure 5
- Railroad and rail crossings – Figure 6
Roadway, Sidewalks and Bicycle Lane Inventory

The following roadway characteristics were collected for all the State and County roadway facilities, including arterial and collector roadways within a half-mile radius of public schools within Hardee County. This information, along with the bicycle and pedestrian generation information described in the previous section was used to create the geodatabase and identify any existing deficiencies in the sidewalk and bicycle facilities and, where applicable, illustrated in maps found in Figures 7A through 11.

Following are the various roadway characteristics collected in the field:

Roadway:

- Number of lanes – Figures 7A – 7D
- One-way or two-way traffic flow
- Speed limit – Figures 8A – 8D
- Maintaining agency or jurisdiction
- Signalized intersections – Figure 9

Sidewalks:

- Side of roadway (This field specifies if a sidewalk is located on one or both sides of the roadway) – Figures 10A – 10D
- Sidewalk width left side
- Sidewalk width right side

Bicycle Lane:

- Side of roadway (This field specifies if a bicycle lane is located on one or both sides of the roadway) – Figure 11
- Bicycle lane width left side
- Bicycle lane width right side
- Designated (This field helps to determine if the bicycle lane is a designated bicycle lane or un-designated bicycle lane)
HARDEE COUNTY BICYCLE AND PEDESTRIAN MASTER PLAN

City of Bowling Green

Number of Lanes Map

LEGEND
- 1 Lane Roadway
- 2 Lane Roadway
- 3 Lane Roadway

Hardee County
Cities & Towns in Hardee County

Note: Symbology for US 17/US 301 represents number of lanes in one direction

Date: 7/24/2013

Florida Department of Transportation
Review of Local Comprehensive Plan Goals and Policies

This section of the Master Plan summarizes the Goals and Policies from the respective currently adopted Comprehensive Plans of Hardee County, the Cities of Bowling Green and Wauchula, and the Town of Zolfo Springs, pertinent to bicycle and pedestrian facilities. This review of local government goals and policies aids in identifying the goals and policies that are supportive of developing a safe bicycle/pedestrian-friendly environment. As such the following planning documents were reviewed:

1) Hardee County Comprehensive Plan
2) Hardee County Unified Land Development Code
3) City of Bowling Green Comprehensive Plan
4) City of Bowling Green Unified Land Development Code
5) City of Wauchula Comprehensive Plan
6) City of Wauchula Unified Land Development Code
7) Town of Zolfo Springs Comprehensive Plan
8) Town of Zolfo Springs Unified Land Development Code

Following is a list of Policies that are currently adopted by Hardee County and its local municipalities to achieve a safe, accessible, and well-connected bicycle/pedestrian system.
Hardee County Comprehensive Plan

Future Land Use Element

Policy L 1.11: 12 Development Standards:

iii) The design shall include a pedestrian circulation system to connect the proposed uses. Primary pedestrian routes and bikeways shall coincide with the internal street system or other public spaces such as parks or squares, and should avoid routes through parking lots.

Transportation Element

Policy T1.6:

Transportation projects to increase safety in Hardee County will include consideration of bicycle and pedestrian facilities as additions to roadway expansion projects or new roadway construction.

Policy T5.2:

To provide for energy efficiency and savings, alternative modes of transportation shall be accommodated to create communities and developments that are not solely reliant on the automobile for all transportation trips. At a minimum, this will address conceptual designs to accommodate: transit, pedestrians, bicycles, and alternative vehicles (e.g., electric vehicles, etc.) Hardee County shall consider providing bicycle or pedestrian facilities on public new road construction or reconstruction, where feasible; also, encourage the contribution of bicycle and pedestrian facilities in private developments.

Housing Element

Policy H8.3:

The County shall, through the Future Land Use Map and Future Land Use Categories, encourage a higher concentration of densities, pedestrian-oriented urban neighborhoods where the mix of activity provides access to a full range of residential services and amenities, and opportunities for people to live within walking distance of employment.
Recreation and Open Space Element

Policy R3.6:

Through the development approval process, the County will encourage new development to provide pedestrian interconnectivity within the project and to areas external to the project such as the County’s parks and recreation system.

Public School Facilities Element

Policy PSF5.6:

Public schools shall provide bicycle and pedestrian access consistent with Florida Statutes. Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the County and municipalities. Parking and sidewalks at public schools will be provided consistent with applicable land development regulations.

Hardee County Unified Land Development Code

3.08.00. - Sidewalks.

Design and Construction Standards. Design and construction of sidewalks and other footpaths shall conform to all applicable engineering requirements adopted by Hardee County, including provisions for access by physically handicapped persons.

A) New subdivisions abutting Principal and Minor Arterials and Major Rural Collectors shall provide sidewalks adjacent to such roadways. Location of sidewalks shall be consistent with planned roadway improvements. Sidewalk construction shall be exempt in F-R and A-1 zoning districts. Developments of one acre or more in the R-1, R-2, R-3 and PUD overlay zoning districts may request the sidewalk requirements to be paid in lieu of construction. The Board of County Commissioners may at the time of Subdivision Plat approval, approve payment in lieu of construction. The fee shall be based on calculated costs of construction and approved by the Director of Public Works prior to Board action.
(B) Sidewalks shall be provided on both sides of all residential streets where the average lot width at the street is less than 150 feet, except as otherwise exempted.

(C) Where a proposed development includes improvements or new construction of Collector or Arterial facilities, facility designs shall include provision for sidewalks and footpaths within the right-of-way.

(D) Residential developments adjacent to or in the immediate vicinity of commercial, office, service, schools or recreation activities shall provide pedestrian and bicycle access from the development to the activity center.

(E) Sidewalks shall be of concrete construction, a minimum of 5 feet in width and 4 inches in thickness.

(F) Pedestrian-ways or crosswalks, not less than 10 feet wide with a sidewalk meeting the requirements of this Section, may be required to be placed in the center of blocks more than 800 feet long where deemed necessary to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.

**Section 1.6. Pedestrian Ways and Bike Paths**

All developments having lots primarily facing Arterial or Collector roads shall provide concrete pedestrian ways on the right-of-way of these roads.

Pedestrian ways or bike paths shall be a minimum of five feet in width. Where the subdivider elects to provide a pedestrian corridor on a local road, the corridor may be incorporated as part of the lot outside of, but adjacent to and abutting, the right-of-way lines, as an easement, and no obstructions will be allowed in these areas, without a variance.

If existing right-of-way is insufficient, additional right-of-way must be provided for pedestrian way construction.
City of Bowling Green Comprehensive Plan

Future Land Use Element

Policy 2.3: The City shall require new development and substantial development to conform to the following criteria:

C) Integrate pedestrian-oriented features, including sidewalks, trail, or walkways into all development including pedestrian shelters or awnings;

Policy 9.1: The City shall, through new development and redevelopment, promote the creation of interconnected systems for vehicular and pedestrian travel and the location and orientation of buildings and vehicular parking areas.

Transportation Element

Policy 5.1: Bowling Green shall include in its Land Development Regulations the requirement that new commercial and residential development dedicate sidewalks.

Policy 5.2: Bowling Green shall implement a program that inventories and prioritizes sidewalk construction and repair.

Policy 5.3: The City shall prioritize new sidewalk construction for those areas of the City lacking an existing sidewalk network.

Policy 5.4: Bowling Green shall cooperate with the Hardee County School Board to ensure that new schools, parks, and playgrounds provide pedestrian access.

Policy 5.5: New sidewalks shall be designed to be accessible to handicapped persons. Adopted December 13, 2011.

Policy 5.6: Plans for the expansion of arterial and collector roads in Bowling Green shall include bicycle ways where practical.
Policy 6.1: The City will work to develop, where feasible, a bicycle facility network through the inclusion of bikeways in road construction projects and through greenways.

Policy 6.2: The City shall work to develop, where feasible, a bicycle network such that all significant commercial, employment, public school facilities, and recreational centers are accessible via a bikeway route along at least one collector or arterial roadway route serving the center.

Policy 6.3: The City shall encourage bicycle facilities at commercial and recreational areas and other appropriate locations.

**Public School Facilities Element**

Policy 5.4: Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the City. Parking and sidewalks at public schools will be provided consistent with applicable land development regulations.

**Recreation and Open Space Element**

Policy 2.4: As part of the Transportation Element, identify and designate bicycle and/or pedestrian routes along local streets linking public recreational facilities. In addition, provide the appropriate signage along such routes to improve accessibility.

**City of Bowling Green Unified Land Development Code**

3.02.04 Sidewalks and Bikeways

(A) When Required

(1) Projects abutting Urban Collector or Principal Arterial facilities shall provide sidewalks adjacent to such roadways. Location of sidewalks shall be consistent with planned roadway improvements.

(2) Sidewalks shall be provided on both sides of all residential streets where the average lot width at the street is 60 feet or less.
(3) Sidewalks shall be provided on one side of all residential streets where the average lot width at the street is greater than 60 feet but less than 150 feet.

(4) Where a proposed development includes improvements or new construction of collector or arterial facilities, facility designs shall include provision for sidewalks and bikeways within the right-of-way.

(5) Residential projects adjacent to or in the immediate vicinity of commercial, office, service, or recreation activities shall provide pedestrian and bicycle access from the development to the activity center.

(6) Pedestrian-ways or crosswalks, not less than 10 feet wide with a sidewalk meeting the requirements of this Section, may be required to be placed in the center of blocks more than 800 feet long where deemed necessary to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.

City of Wauchula Comprehensive Plan

Future Land Use Element

Policy 5.3: The City shall require new development and substantial redevelopment to conform with the following criteria:

C) Integrate pedestrian-oriented features, including sidewalks, trails, or walkways into all development including pedestrian shelters or awnings;

Policy 11.2: The City shall, through new development and redevelopment, promote the creation of interconnected systems for vehicular and pedestrian travel and the location and orientation of buildings and vehicular parking areas.
Traffic Circulation Element

Policy 2.3: The City will promote mixed-use developments with multimodal provisions that include sidewalks, bikeways and trails linkages between commercial areas and residential areas. [9]-5.019(4)(c) 9.

Policy 2.6: The City will minimize disruption to its historic downtown and historic buildings that may result from the construction of roadway improvements and transit projects; the City shall plan pedestrian and bicycle routes that minimize disruption of the historic street grid in downtown. [9]-5.019(4)(c) 5.

Policy 4.1: The City will analyze the existing sidewalk network annually and identify key gaps in pedestrian routes, including near schools, parks, and trails; and in the future, transit stops. [9]-5.019(4)(c) 5.

Policy 4.2: Funding priorities for correcting existing deficiencies and for future sidewalk improvements shall first be directed to locations where a critical public safety concern or an emergency exists; and second, serve pedestrian needs within ¼ mile of all schools, parks, and trails; and in the future, transit stops, aviation and rail facilities. [9]-5.019(4)(c) 6, 8, 14.

Policy 4.3: The City will incorporate consideration of sidewalks and bikeways in all roadway improvements and new construction. Sidewalks and bikeways will be constructed where practical in the existing rights-of-way throughout the City. [9]-5.019(4)(c) 5, 6.

Policy 4.4: Sidewalks and bikeways shall be combined where practical and feasible to keep the cost of improvements and maintenance to a minimum. The City will incorporate sidewalk and bikeway features into intersection projects and resurfacing projects to keep the cost of such projects to a minimum.

Policy 4.5: Expand the coverage of the City’s bikeway facility network by including bikeways as part of local or regional greenway trail development.

Policy 4.6: Improve the bikeway network such that all significant commercial, employment, and recreational centers are accessible via a bikeway route along a collector or arterial route serving the center; or via a greenway where available.
Policy 4.7: Support the acquisition of right-of-way or easement for a bike path/walkway along the Peace River connecting Wauchula's Peace River Park with Paynes Creek Park to the north in Bowling Green and Pioneer Park to the south in Zolfo Springs.

Policy 4.8: The City will work with the FDOT and Hardee County in the identification of locations for sidewalks and bikeway on State and County highways. [9-5.019(4)(c) 5, 6.]

Public School Facilities Element

Policy 5.4: Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the City. Parking and sidewalks at public schools will be provided consistent with applicable land development regulations.

City of Wauchula Unified Land Development Code

3.02.06 Sidewalks and Bikeways

Design and Construction Standards. Design and construction of sidewalks and bikeways shall conform to all applicable engineering requirements adopted by the City of Wauchula, including provisions for access by physically handicapped persons.

(A) Projects abutting collector or arterial facilities shall provide sidewalks adjacent to such roadways. Location of sidewalks shall be consistent with planned roadway improvements.

(B) Sidewalks shall be provided on both sides of all residential streets where the average lot width at the street is 60 feet or less.

(C) Sidewalks shall be provided on one side of all residential streets where the average lot width at the street is greater than 60 feet.

(D) Where a proposed development includes improvements or new construction of collector or arterial facilities, facility designs shall include provision for sidewalks and bikeways within the right-of-way.
(E) Residential projects adjacent to or in the immediate vicinity of commercial, office, service, schools or recreation activities shall provide sidewalks from the development to the activity center.

(F) Pedestrian-ways or crosswalks, not less than 10 feet wide with a sidewalk meeting the requirements of this Section, may be required to be placed in the center of blocks more than 800 feet long where deemed necessary to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.

Town of Zolfo Springs Comprehensive Plan

**Future Land Use Element**

Policy 2.7: The Town shall require new development and substantial redevelopment to conform to the following criteria:

C) Integrate pedestrian-oriented features, including sidewalks, trails, or walkways into all development including pedestrian shelters;

**Traffic Circulation Element**

Policy 2.8: The Town shall prioritize new sidewalk construction for those areas of the Town lacking and existing sidewalk network.

Policy 4.1: At a minimum, at the conceptual design stage of development, address features that accommodate: future transit, pedestrians, bicycles, and alternative vehicles (i.e. electric vehicles, etc).

Policy 4.2: The Town shall encourage bicycle facilities at commercial and recreational areas and other appropriate locations.

**Housing Element**

Policy 8.4: The Town shall, through the Future Land Use Map and Future Land Use Categories, encourage pedestrian-oriented urban neighborhoods having convenient access to regional transit stations
where the mix of activity provides access to a full range of residential services and amenities, and opportunities for people to live within walking distance of employment.

Recreation and Open Space Element

Policy 1.4: Through the development approval process, the Town will encourage new development to provide pedestrian interconnectivity within the project and to areas external to the project such as the Town’s parks and recreation system and schools.

Public School Facilities Element

Policy 1.5.4: Bicycle access and trails to public schools should be incorporated in trail projects and programs that are currently scheduled by the Town. Parking and sidewalks at public schools will be provided consistent with applicable land development regulations.

Town of Zolfo Springs Unified Land Development Code

3.02.04 Sidewalks and Bikeways

(A) When Required

(1) Projects abutting Urban Collector or Principal Arterial facilities shall provide sidewalks adjacent to such roadways. Location of sidewalks shall be consistent with planned roadway improvements.

(2) Sidewalks shall be provided on both sides of all residential streets where the average lot width at the street is 60 feet or less.

(3) Sidewalks shall be provided on one side of all residential streets where the average lot width at the street is greater than 60 feet but less than 150 feet.
(4) Where a proposed development includes improvements or new construction of collector or arterial facilities, facility designs shall include provision for sidewalks and bikeways within the right-of-way.

(5) Residential projects adjacent to or in the immediate vicinity of commercial, office, service, or recreation activities shall provide pedestrian and bicycle access from the development to the activity center.

(6) Pedestrian-ways or crosswalks, not less than ten feet wide with a sidewalk meeting the requirements of this Section, may be required to be placed in the center of blocks more than 800 feet long where deemed necessary to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.
Programmed Improvements

Table 1 summarizes the programmed improvements identified in the FDOT Five Year Work Program Fiscal Year (FY) 2012/13 – FY 2016/17 (as of 03/01/2013). Table 2 summarizes the programmed improvements identified in the FDOT Draft Tentative Work Program FY 2013/14 – FY 2017/18. In addition, the City of Wauchula has a sidewalk project currently programmed along the north side of Stenstrom Road from Chatham Pointe Apartments to US 17 southbound. All the improvements identified in Tables 1 and 2 (including the Stenstrom Road improvement) are depicted in Figure 12.
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<th>From</th>
<th>To</th>
<th>Project Type</th>
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<th>Year</th>
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<td>Dixiana Avenue</td>
<td>Jones Street</td>
<td>Grape Street</td>
<td>Sidewalk</td>
<td>CST</td>
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<td>City of Bowling Green</td>
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<tr>
<td>428142-1</td>
<td>E Main Street</td>
<td>US 17</td>
<td>E. of Lake Branch Road</td>
<td>Sidewalk</td>
<td>CST</td>
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Source: FDOT Work Program FY 2012/13 - FY 2016/17
CST - Construction
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<th>From</th>
<th>To</th>
<th>Project Type</th>
<th>Phase</th>
<th>Year</th>
<th>Location</th>
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<tr>
<td>429816-1</td>
<td>Dixiana Avenue</td>
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<td>Grape Street</td>
<td>Sidewalk</td>
<td>CST</td>
<td>2016</td>
<td>City of Bowling Green</td>
</tr>
<tr>
<td>428142-1</td>
<td>E Main Street</td>
<td>US 17</td>
<td>E of Lake Branch Road</td>
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<td>CST</td>
<td>2014</td>
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<tr>
<td>433192-1</td>
<td>Griffin Road</td>
<td>Bridge Number 060030 over Peace River</td>
<td>Bridge Replacement</td>
<td>PDE</td>
<td>2018</td>
<td>City of Wauchula</td>
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<tr>
<td>433193-1</td>
<td>Mason Dixion-Lemon</td>
<td>County Line Road</td>
<td>US 17</td>
<td>Sidewalk</td>
<td>CST</td>
<td>2015</td>
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<tr>
<td>433603-1</td>
<td>N Main Street</td>
<td>Illinois Avenue</td>
<td>US 17</td>
<td>Flexible Pavement Reconstruct</td>
<td>CST</td>
<td>2015</td>
<td>City of Wauchula</td>
</tr>
<tr>
<td>431340-1</td>
<td>SR 64</td>
<td>At SR 636</td>
<td></td>
<td>Intersection Improvement</td>
<td>CST</td>
<td>2017</td>
<td>E. of City of Wauchula</td>
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<tr>
<td>433446-1</td>
<td>SR 64</td>
<td>Over Peace River at Bridge Number 060021</td>
<td>Bridge-Repair/Rehabilitation</td>
<td>CST</td>
<td>2016</td>
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<tr>
<td>414547-1</td>
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<td>Desoto C/L</td>
<td>CR 634</td>
<td>Add Lanes &amp; Reconstruct</td>
<td>CST</td>
<td>2016</td>
<td>N. of City of Wauchula</td>
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<tr>
<td>431341-1</td>
<td>US 17</td>
<td>KD Revell Road</td>
<td>REA Road</td>
<td>Sidewalk</td>
<td>CST</td>
<td>2016</td>
<td>N. of City of Wauchula</td>
</tr>
<tr>
<td>420633-3</td>
<td>US 17</td>
<td>9th Street</td>
<td>N of 3rd Street</td>
<td>Add Lanes &amp; Reconstruct</td>
<td>ROW</td>
<td>2015</td>
<td>Town of Zolfo Springs</td>
</tr>
</tbody>
</table>


CST - Construction; ROW - Right of Way
Crash Analysis

Detailed crash reports were obtained from the FDOT Crash Analysis Reporting System (CARS) database for all crashes involving bicycles and pedestrians within Hardee County. This data covers the period from August 29, 2008 to September 9, 2011. A crash summary is provided in Table 3 and crash diagrams are provided in Figures 13A through 13D.

Based on this information and engineering judgment, there appears to be a pattern of crashes near north Florida Ave. at US 17 (Unincorporated Hardee County). Four separate crashes occurred at this location where pedestrians were struck crossing or walking on the shoulder of US 17 (three fatalities related to crash numbers 2, 11, and 16). Additionally, near the intersection of Franklin Street at US 17 (City of Bowling Green) two separate crashes occurred where pedestrians were struck crossing US 17 (two fatalities related to crash numbers 4 and 14).

During the three year analysis period, it is noted that 8 of 23 crashes occurred at or after dark. Five of these eight crashes occurred on the US 17 corridor (Crash numbers 2, 3, 11, 14, and 19), of which three crashes resulted in fatalities (Crash numbers 2, 11, and 14). Table 4 illustrates the lighting information for US 17 within Hardee County based on the information obtained from the FDOT RCI Database.
### Table 3: County Wide Crash Summary

<table>
<thead>
<tr>
<th>CRASH REF. NO.</th>
<th>DATE</th>
<th>TIME</th>
<th>DOB</th>
<th>AGE</th>
<th>CRASH TYPE</th>
<th>INJURY</th>
<th>PROPERTY DAMAGE</th>
<th>DAY/ NIGHT</th>
<th>WEATHER</th>
<th>CONTRIBUTING CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/29/2008</td>
<td>6:08 PM</td>
<td></td>
<td>74</td>
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<td>SIDE SWIPE</td>
<td>$500</td>
<td>DAY</td>
<td>DRY</td>
<td>IMPROPER LANE CHANGE</td>
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<tr>
<td>2</td>
<td>4/2/2009</td>
<td>9:50 PM</td>
<td>47</td>
<td>12</td>
<td>BIKE</td>
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<td>$2,000</td>
<td>DAY</td>
<td>DRY</td>
<td>PTYRW</td>
</tr>
<tr>
<td>3</td>
<td>4/2/2009</td>
<td>11:20 PM</td>
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<td>45</td>
<td>BIKE</td>
<td>HIT PEDESTRIAN</td>
<td>$500</td>
<td>DAY</td>
<td>DRY</td>
<td>CARELESS DRIVING</td>
</tr>
<tr>
<td>4</td>
<td>4/11/2009</td>
<td>5:05 AM</td>
<td>27</td>
<td>45</td>
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<td>NIGHT</td>
<td>DRY</td>
<td>PTYRW</td>
</tr>
<tr>
<td>5</td>
<td>5/15/2009</td>
<td>9:30 AM</td>
<td>18</td>
<td>45</td>
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<td>HIT PEDESTRIAN</td>
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<td>6</td>
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<td>12:58 PM</td>
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<td>DRY</td>
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<tr>
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<td></td>
<td>BIKE</td>
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<td>$0</td>
<td>DUSK</td>
<td>DRY</td>
<td>PTYRW</td>
</tr>
<tr>
<td>8</td>
<td>9/2/2009</td>
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<td>9</td>
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<tr>
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<td>DRY</td>
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<tr>
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<tr>
<td>12</td>
<td>3/2/2010</td>
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<td>DRY</td>
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<td>13</td>
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<tr>
<td>14</td>
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<td>DRY</td>
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<tr>
<td>15</td>
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<td></td>
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<td>DRY</td>
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</tr>
<tr>
<td>16</td>
<td>8/5/2010</td>
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<td></td>
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<td>DRY</td>
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<tr>
<td>17</td>
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<td>NIGHT</td>
<td>DRY</td>
<td>NO IMPROPER DRIVING</td>
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<tr>
<td>19</td>
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<td>$0</td>
<td>NIGHT</td>
<td>DRY</td>
<td>NO IMPROPER DRIVING</td>
</tr>
<tr>
<td>20</td>
<td>8/5/2010</td>
<td>9:45 AM</td>
<td></td>
<td></td>
<td>BIKE</td>
<td>HIT PEDESTRIAN</td>
<td>$0</td>
<td>NIGHT</td>
<td>DRY</td>
<td>NO IMPROPER DRIVING</td>
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<tr>
<td>21</td>
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<td>HIT PEDESTRIAN</td>
<td>$0</td>
<td>NIGHT</td>
<td>DRY</td>
<td>NO IMPROPER DRIVING</td>
</tr>
</tbody>
</table>

**TOTAL CRASHES:** 23

**TOTAL INJURY:** 5

**TOTAL FATAL:** 11

---

**Contributing Cause:**
- FTYRW: Failure to Yield Right of Way
- DUI: Driving Under the Influence
- OTHER: For Driving Under the Influence

---

**Lighting Condition:**
- DAY: 65%
- NIGHT: 35%

**Road Condition:**
- DRY: 85%
- WET: 15%

---

**Contributing Cause Breakdown:**
- IMPROPER LANE CHANGE: 32%
- IMPROPER BACKING: 22%
- IMPROPER SPEED: 13%
- IMPROPER HEADLIGHTS: 4%
- IMPROPER Signal: 4%
- IMPROPER INTERSECTION: 3%
- IMPROPER RIGHT OF WAY: 2%
- IMPROPER TURN: 2%
- IMPROPER STOP: 1%
- IMPROPER CORNER: 1%
Table 4: US 17 Lighting Information

<table>
<thead>
<tr>
<th>Begin MP</th>
<th>End MP</th>
<th>Characteristic</th>
<th>Value</th>
<th>Unit</th>
<th>Side</th>
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<td>EA</td>
<td>L</td>
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<tr>
<td>10</td>
<td>11</td>
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<td>ZOLFO SPRINGS</td>
<td>EA</td>
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<tr>
<td>10</td>
<td>11</td>
<td>LUMINAIRES UNDER LOCAL AGRMNT</td>
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<td>EA</td>
<td>R</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
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<td>L</td>
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<tr>
<td>11</td>
<td>11.753</td>
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<td>EA</td>
<td>R</td>
</tr>
<tr>
<td>11</td>
<td>11.753</td>
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<td>ZOLFO SPRINGS</td>
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<td>R</td>
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<tr>
<td>15.292</td>
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<td>L</td>
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<td>16</td>
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<td>EA</td>
<td>L</td>
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<tr>
<td>15.292</td>
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<td>LUMINAIRES UNDER LOCAL AGRMNT</td>
<td>13</td>
<td>EA</td>
<td>R</td>
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<tr>
<td>15.292</td>
<td>16</td>
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<td>WAUCHULA</td>
<td>EA</td>
<td>R</td>
</tr>
<tr>
<td>20</td>
<td>21</td>
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<td>20</td>
<td>21</td>
<td>LUMINAIRES UNDER LOCAL AGRMNT</td>
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<td>EA</td>
<td>R</td>
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<tr>
<td>20</td>
<td>21</td>
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<td>BOWLING GREEN</td>
<td>EA</td>
<td>R</td>
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<tr>
<td>21</td>
<td>21.5</td>
<td>LUMINAIRES UNDER LOCAL AGRMNT</td>
<td>8</td>
<td>EA</td>
<td>L</td>
</tr>
<tr>
<td>21</td>
<td>21.5</td>
<td>OWNER OF LOCAL LUMINARIES</td>
<td>BOWLING GREEN</td>
<td>EA</td>
<td>L</td>
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<tr>
<td>21</td>
<td>21.5</td>
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<td>8</td>
<td>EA</td>
<td>R</td>
</tr>
<tr>
<td>21</td>
<td>21.5</td>
<td>OWNER OF LOCAL LUMINARIES</td>
<td>BOWLING GREEN</td>
<td>EA</td>
<td>R</td>
</tr>
</tbody>
</table>

The fatal crash numbers 2 and 11 occurred on US 17 at an approximate Mile Post (M.P.) (a series of posts set up to mark distance by miles used by the FDOT along state roads or an individual post showing the distance from a starting point) of 16.664 and 16.541 respectively. Based on the above RCI data and field verification, these locations do not have any roadway lighting. It is recommended that a “Lighting Justification Study” be conducted along the US 17 corridor between M.P. 16.000 and M.P. 20.000.
Needs Assessment

This section of the Master Plan involved field reviews to identify improvements to support existing and future bicycle and pedestrian mobility. This includes a short term assessment, with respect to identification of locations of concern that are not in compliance with the standards set forth in the ADA guidelines and other safety issues. The long term assessment was conducted in regards to providing an accessible and well-connected bicycle/pedestrian system.

ADA, Bicycle and Pedestrian Design Improvements

Short term improvements are those improvements that can be accomplished by the identification of areas of concern based on minimum criteria set forth in ADA Standards for Accessible Design, the Manual on Uniform Traffic Control Devices (MUTCD), the FDOT Plans Preparation Manual (PPM), and the Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.

This section discusses short term pedestrian improvements based on the identification and evaluation of facilities that fall below the minimum safety/mobility criteria.

The safety/mobility evaluation was conducted at specific intersections, school areas, and areas with a history of bicycle and pedestrian crashes.

Intersections:

A field review was conducted to identify the short term improvements related to intersection specific concerns such as: sidewalk, curb cut ramps, crosswalks, roadway signing, pedestrian signals, lighting and sight obstructions. Of the thirteen signalized intersections within Hardee County the following five intersections were selected as specific areas of interest. These signalized intersections were selected based on the presence of crosswalks, number of lanes, history of bicycle/pedestrian crashes at the intersection, and areas of attraction for bicycle/pedestrian trips. The rationale for intersection selections are listed below:
- **US 17 (SR 35) at REA Road (Section 6010000 M.P. 16.136)** - Adjacent to the commercial shopping area, including Wal-Mart and Winn Dixie
- **US 17 (S. 6th Avenue) at Main Street (Section 6010102 M.P. 0.687)** - A pedestrian crash occurred at this intersection within last 3 years
- **US 17 (SR 35) at SR 64 (Section 6010000 M.P. 11.136)** - A large intersection with channelized yield controlled right turn lanes with a busy Circle K convenience store located at the intersection
- **Florida Ave. (CR 35A) at west Main Street (CR 64A)** - Residential area with heavy pedestrian use located near a school
- **US 17 (SR 35) at Main Street (CR 664) (Section 6010000 M.P. 20.959)** - A pedestrian crash occurred at this intersection within last 3 years

Figures 14A through 14E illustrate the ADA and safety concerns identified at these intersections. **Table 5** lists the associated guideline reference, and the potential improvements for these intersections.
Sidewalk crack out of vertical alignment (max 1/4"

Push button farther than 10' from crosswalk

No road names on the push button pedestrian sign

Detectable warning surface damaged

Insufficient Pedestrian clearance time.

Detectable warning surface damaged
- Ramp slope exceeds maximum of 1:12.
- Pedestrian detector is not next to a flat landing (1:48 max).
Push button sign lost reflectivity

Insufficient pedestrian clearance time.

Truncated dome type detectable warning surfaces missing from all ramps

Insufficient pedestrian clearance time.

Pedestrian signal does not show "Don’t Walk" Symbol. Pedestrian Push button sign missing.
Sidewalk crack out of vertical alignment (max 1/4")

- Ramp slope exceeds maximum of 1:12.
- Truncated dome type detectable warning surface missing

Sidewalk out of vertical alignment (max 1/4")

- Ramp slope exceeds maximum of 1:12.
- Dirt and debris collects obstructing pathway.
- Truncated dome type detectable warning surface missing

Dirt and debris collects obstructing pathway.

Truncated dome type detectable warning surface missing

Crosswalk with no curb cut ramp.

Figure 14D

HARDEE COUNTY BICYCLE AND PEDESTRIAN MASTER PLAN
Intersection Safety & ADA Concerns

Florida Avenue and W. Main Street
City of Wauchula

Page 57

Florida Department of Transportation

Date: 7/25/2013
Obstructed view of pedestrian crossing sign

Pedestrian signal non-countdown type

Malfunctioning pedestrian crossing signal timing

Landing area does not meet minimum clear space of 48" x 36" next to pedestrian push button

Pedestrian Signal head not visible from Pedestrian crossing

Malfunctioning pedestrian crossing signal timing
### Table 5: Intersection Safety and ADA Improvements

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 17 at REA Road (Sec. 6010000 M.P. 16.136)</td>
<td>Sidewalk Repair</td>
<td>Repair cracked sidewalk where it is out of vertical alignment.</td>
<td>FDOT District 1</td>
<td>ADA 303.3</td>
</tr>
<tr>
<td>US 17 at REA Road (Sec. 6010000 M.P. 16.136)</td>
<td>Relocate Existing Pedestrian Detector</td>
<td>Relocate pedestrian detector in the NW corner so that it is closer to curb ramp across the west leg.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.08</td>
</tr>
<tr>
<td>US 17 at REA Road (Sec. 6010000 M.P. 16.136)</td>
<td>Detectable Warning Surface</td>
<td>Repair damaged truncated dome type detectable warning surfaces in the NW corner</td>
<td>FDOT District 1</td>
<td>ADA 705</td>
</tr>
<tr>
<td>US 17 at REA Road (Sec. 6010000 M.P. 16.136)</td>
<td>Pedestrian Detector Sign</td>
<td>Add pedestrian signs on pedestrian signal detector poles, with roadway names describing correct pedestrian signal crossing.</td>
<td>FDOT District 1</td>
<td>Design Standard Index No. I7784</td>
</tr>
<tr>
<td>US 17 at REA Road (Sec. 6010000 M.P. 16.136)</td>
<td>Pedestrian Clearance Time</td>
<td>Increase pedestrian clearance times along the north leg of the intersection</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.06</td>
</tr>
<tr>
<td>US 17 (S. 6th Avenue) at Main Street (Sec. 6010102 M.P. 0.687)</td>
<td>Ramp Slope</td>
<td>Adjust pedestrian ramp slope to 1:12 in the SW corner of the intersection.</td>
<td>FDOT District 1</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td>US 17 (S. 6th Avenue) at Main Street (Sec. 6010102 M.P. 0.687)</td>
<td>Ramp Slope</td>
<td>Adjust pedestrian ramp slope to 1:12 in the NE corner of the intersection.</td>
<td>FDOT District 1</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td>US 17 (S. 6th Avenue) at Main Street (Sec. 6010102 M.P. 0.687)</td>
<td>Relocate Exist. Pedestrian Detector</td>
<td>Move pedestrian detector in the NE corner next to a flat landing.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.08</td>
</tr>
<tr>
<td>US 17 (S. 6th Avenue) at Main Street (Sec. 6010102 M.P. 0.687)</td>
<td>Relocate Exist. Pedestrian Detector</td>
<td>Move pedestrian detector in the SW corner next to a flat landing.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.08</td>
</tr>
<tr>
<td>US 17 at SR 64 (Sec. 6010000 M.P. 11.136)</td>
<td>Replace Pedestrian Detector Sign</td>
<td>Pedestrian detector sign in the pedestrian island in the NW corner of the intersection is worn and needs replacement.</td>
<td>FDOT District 1</td>
<td>Design Standard Index No. I7784</td>
</tr>
<tr>
<td>US 17 at SR 64 (Sec. 6010000 M.P. 11.136)</td>
<td>Pedestrian Clearance Time</td>
<td>Increase pedestrian clearance times along the north leg of the intersection</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.06</td>
</tr>
<tr>
<td>US 17 at SR 64 (Sec. 6010000 M.P. 11.136)</td>
<td>Pedestrian Clearance Time</td>
<td>Increase pedestrian clearance times along the east leg of the intersection</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.06</td>
</tr>
<tr>
<td>US 17 at SR 64 (Sec. 6010000 M.P. 11.136)</td>
<td>Install Pedestrian Detector Sign</td>
<td>Install pedestrian detector sign in the pedestrian island at the SE corner of the intersection.</td>
<td>FDOT District 1</td>
<td>Design Standard Index No. I7784</td>
</tr>
<tr>
<td>US 17 at SR 64 (Sec. 6010000 M.P. 11.136)</td>
<td>Install Detectable Warning Surfaces</td>
<td>Install truncated dome type detectable warning surfaces to all ramps within the intersection.</td>
<td>FDOT District 1</td>
<td>ADA 705</td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at W. Main Street (CR 64A)</td>
<td>Sidewalk Repair</td>
<td>Repair cracks and gaps where sidewalk is out of horizontal or vertical alignment.</td>
<td>Hardee County</td>
<td>ADA 303.3</td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at W. Main Street (CR 64A)</td>
<td>Ramp Slope</td>
<td>Adjust pedestrian ramp slopes to 1:12 in the NW, NE, and SE corners of the intersection.</td>
<td>Hardee County</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at W. Main Street (CR 64A)</td>
<td>Install Detectable Warning Surfaces</td>
<td>Install truncated dome type detectable warning surfaces to all ramps within the intersection.</td>
<td>Hardee County</td>
<td>ADA 705</td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at W. Main Street (CR 64A)</td>
<td>Install Curb Ramp</td>
<td>Install curb ramp in the SE corner of the intersection for the east leg cross walk.</td>
<td>Hardee County</td>
<td>MUTCD 3B.18</td>
</tr>
<tr>
<td>US 17 (Oak Street) at Main Street (CR 664) (Section 6010000 M.P. 20.959)</td>
<td>Relocate Exist. Pedestrian Detector</td>
<td>Move pedestrian detector in the SW corner next to a flat landing.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.08</td>
</tr>
<tr>
<td>US 17 (Oak Street) at Main Street (CR 664) (Section 6010000 M.P. 20.959)</td>
<td>Install Pedestrian Signal</td>
<td>Remove existing pedestrian signal and install a count-down type pedestrian signal.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.07</td>
</tr>
<tr>
<td>US 17 (Oak Street) at Main Street (CR 664) (Section 6010000 M.P. 20.959)</td>
<td>Adjust Pedestrian Signal timings</td>
<td>Existing pedestrian signal timing is malfunctioning and needs to be adjusted.</td>
<td>FDOT District 1</td>
<td>Engineering Judgement</td>
</tr>
<tr>
<td>US 17 (Oak Street) at Main Street (CR 664) (Section 6010000 M.P. 20.959)</td>
<td>Relocate School Crossing Sign</td>
<td>Relocate existing school crossing sign in the NE corner.</td>
<td>FDOT District 1</td>
<td>MUTCD 1A.04</td>
</tr>
<tr>
<td>US 17 (Oak Street) at Main Street (CR 664) (Section 6010000 M.P. 20.959)</td>
<td>Adjust Pedestrian Signal</td>
<td>Pedestrian signal head in the SE corner needs to be adjusted for better visibility.</td>
<td>FDOT District 1</td>
<td>MUTCD 4E.04</td>
</tr>
</tbody>
</table>
School Areas

A field review, along with information gathered from local law enforcement and school representatives, was conducted to identify major bicycle and pedestrian routes for students during school opening and closing hours and identify safety concerns for all schools within Hardee County. Safety concerns related to bicycle and pedestrian trips were identified by corridor features such as: sidewalk, curb cut ramps, crosswalks, roadway signing, pedestrian signals, pedestrian and street lighting, and sight obstructions. In addition, engineering judgment was used to determine if there are any other safety concerns for bicycles and pedestrians within the corridor. The following five schools were selected as areas of interest for safety and ADA concerns within Hardee County:

- North Wauchula Elementary School
- Wauchula Elementary School
- Hilltop Elementary/Middle School
- Bowling Green Elementary School
- Zolfo Springs Elementary School

Figures 15A through 15E illustrate the ADA and safety concerns identified within the school areas. Tables 6A through 6E lists the potential improvements and associated design guideline references for each school area.
Sidewalk crack causes cross slope greater than 1:48

Sidewalk slabs out of vertical alignment greater than 1/4".

No landing area at ramp.

-Ramp slope exceeds maximum 1:12.
-Missing truncated dome type detectable warning surfaces on ramps from W. Townsend Street to Wauchula Elementary School.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR 35A (Florida Ave) at Townsend</td>
<td>Ramp</td>
<td>Adjust pedestrian ramp slope to 1:12</td>
<td>Hardee County</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td>Street</td>
<td>Detectable Warning</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Hardee County</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at Kentucky</td>
<td>Ramp</td>
<td>Install landing area at ramp.</td>
<td>Hardee County</td>
<td>ADA 405.7</td>
</tr>
<tr>
<td>Street</td>
<td>Detectable Warning</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Hardee County</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR 35A (Florida Ave) at Bell Street</td>
<td>Sidewalk Repair</td>
<td>Repair cracks and gaps where sidewalk is out of vertical alignment.</td>
<td>Hardee County</td>
<td>ADA 303.3</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Hardee County</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Add crosswalk markings across Carlton Street.
- Truncated dome type detectable warning surfaces missing along Florida Avenue and Carlton Street.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR 35A (Florida Ave) at Carlton Street</td>
<td>Install Crosswalk</td>
<td>Add Crosswalk Markings Across Carlton Street</td>
<td>Hardee County</td>
<td>MUTCD 3B.18</td>
</tr>
<tr>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Hardee County</td>
<td>ADA 705</td>
<td></td>
</tr>
</tbody>
</table>
Street lighting only exists at school entrance

School crossing sign (MUTCD Sign 'S1-1') obstructed by bushes for oncoming traffic

MUTCD Sign 'S5-1' flasher is out of order

Pedestrian crossing sign missing.

No street lights along Alamo Avenue

- Crosswalk floods when raining.
- Pedestrians cross at median and conflict with cars coming to pick up students
## Table 6C-Hilltop Elementary/Middle School Safety and ADA Improvements

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainey Boulevard at Alamo Avenue</td>
<td>Crosswalk Improvement</td>
<td>Adjust cross slope of Rainey Boulevard at Alamo Avenue to eliminate flooding across crosswalk</td>
<td>Hardee County</td>
<td>ADA 305.6</td>
</tr>
<tr>
<td>Alamo Avenue</td>
<td>Lighting</td>
<td>Add street lighting along Alamo Avenue for pedestrian traffic walking along roadway in the dark.</td>
<td>Hardee County</td>
<td>Engineering Judgement</td>
</tr>
<tr>
<td>Keeton Road</td>
<td>Lighting</td>
<td>Add Street lighting along Keeton Road for pedestrian traffic walking along roadway in the dark.</td>
<td>Hardee County</td>
<td>Engineering Judgement</td>
</tr>
<tr>
<td>Keeton Road at Alamo Avenue</td>
<td>School Crossing sign</td>
<td>School crossing sign needs to be relocated due to sight obstruction.</td>
<td>Hardee County</td>
<td>MUTCD 1A.04</td>
</tr>
<tr>
<td>Keeton Road</td>
<td>Replace Flasher</td>
<td>Repair MUTCD S5-1 yellow flashing signal</td>
<td>Hardee County</td>
<td>Design Standard Index No. 17344</td>
</tr>
<tr>
<td>Keeton Road at Harris Road</td>
<td>Install School Crossing signs</td>
<td>Install sign panel MUTCD W16-7PL on both school crossing signs</td>
<td>Hardee County</td>
<td>Design Standard Index No. 17344</td>
</tr>
</tbody>
</table>
- Ramp slope exceeds maximum of 1:12
- Truncated dome type detectable warning surface missing from all ramps along Church Avenue

Schools main crossing has no curb ramps

No sidewalk on west side of Church Avenue for pedestrians going into neighborhoods

Overhead Speed zone warning sign has poor reflectivity

Ramp Slope exceeds maximum of 1:12

Truncated dome type detectable warning surface missing from all ramps along Banana Street

Ramp Slope exceeds maximum of 1:12

Primary Pedestrian Traffic Movement

Bowling Green Elementary School
City of Bowling Green

HARDEE COUNTY BICYCLE AND PEDESTRIAN MASTER PLAN

Hardee County
School Areas Safety & ADA Concerns

Date: 7/25/2013
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 17 at Banana Street</td>
<td>Ramp</td>
<td>Adjust pedestrian ramp slope to 1:12 for both crosswalk ramps.</td>
<td>FDOT District 1</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>FDOT District 1</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Church Avenue at Banana Street</td>
<td>Ramp</td>
<td>Adjust pedestrian ramp slope to 1:12 for curb ramp in the NE corner.</td>
<td>City of Bowling Green</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>City of Bowling Green</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Church Avenue at Bowling Green Elementary Entrance</td>
<td>Ramp</td>
<td>Add curb cut ramp at School entrance for pedestrians crossing Church Avenue</td>
<td>City of Bowling Green</td>
<td>Engineering Judgement</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>City of Bowling Green</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Church Avenue at Bowling Green Elementary</td>
<td>Ramp</td>
<td>Adjust pedestrian ramp slope to 1:12 for curb ramp.</td>
<td>City of Bowling Green</td>
<td>ADA 405.2</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>City of Bowling Green</td>
<td>ADA 705</td>
</tr>
</tbody>
</table>
Street lighting only exists at main entrance.

- Crosswalk markings missing across driveway.
- Missing truncated dome type detectable warning surface.

- Dirt and debris collects obstructing pathway.
- Missing truncated dome type detectable warning surface.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Potential Improvements</th>
<th>Lead Responsible Agency</th>
<th>Design Guidelines Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schoohouse Road at Zolfo Springs Elementary</td>
<td>Crosswalk</td>
<td>Install crosswalk markings across both driveway entrances at Zolfo Springs elementary.</td>
<td>Town of Zolfo Springs</td>
<td>MUTCD 3B.18</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Town of Zolfo Springs</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Schoohouse Road at Zolfo Springs Elementary</td>
<td>Clear path obstruction</td>
<td>Adjust driveway cross slope to eliminate collection of dirt and debris across pedestrian path.</td>
<td>Town of Zolfo Springs</td>
<td>ADA 305.6</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Town of Zolfo Springs</td>
<td>ADA 705</td>
</tr>
<tr>
<td>Schoolhouse Road</td>
<td>Street Lighting</td>
<td>Add Street lighting from SR 66 to 4th Street.</td>
<td>Town of Zolfo Springs</td>
<td>Engineering Judgement</td>
</tr>
<tr>
<td></td>
<td>Detectable Warning Surface</td>
<td>Install truncated dome type detectable warning surfaces (where missing) at all curb ramp locations</td>
<td>Town of Zolfo Springs</td>
<td>ADA 705</td>
</tr>
</tbody>
</table>
Bicycle Lane Improvements

Bicycle lane recommendations are based on principles and guidelines set forth in the Federal Highway Administration (FHWA) report FHWA-RD-92-07 and the FDOT Plans Preparation Manual. The purpose of these recommendations is to accommodate and support existing bicyclists, and to encourage and increase bicycle use. There are different types of cyclists using the roadway with different levels of experience, and therefore it is useful to classify these groups. The following “design cyclists” are based on the FHWA-RD-92-07 classification system for bicycle users.

**Group A—Advanced Bicyclists:** These are experienced riders who can operate under most traffic conditions. They comprise the majority of the current users of collector and arterial streets and are best served by the following:

- Direct access to destinations usually via the existing street and highway system.
- The opportunity to operate at maximum speed with minimum delays
- Sufficient operating space on the roadway or shoulder to reduce the need for either the bicyclist or the motor vehicle operator to change position when passing.

**Group B—Basic Bicyclists:** These are casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some will develop greater skills and progress to the advanced level, but there will always be many millions of basic bicyclists. They prefer:

- Comfortable access to destinations, preferably by a direct route, using either low-speed, low traffic-volume streets or designated bicycle facilities.
- Well-defined separation of bicycles and motor vehicles on arterial and collector streets (bicycle lanes or shoulders) or separate bike paths.
Group C—Children. These are pre-teen riders whose roadway use is initially monitored by parents. Eventually they are accorded independent access to the system. They and their parents prefer the following:

- Access to key destinations surrounding residential areas, including schools, recreation facilities, shopping, or other residential areas.
- Residential streets with low motor vehicle speed limits and volumes.
- Well-defined separation of bicycles and motor vehicles on arterial and collector streets or separate bike paths.

A field review of existing bicycle facilities showed very limited bicycle use within Hardee County. The field observations were conducted during the period of 7:00 AM to 5:00 PM. The majority of bicycle trips were children going to and from local schools (group C riders). Therefore, these recommendations focused on providing designated bicycle facilities to accommodate existing and future group B and C bicyclists in order to enhance ridership. This is accomplished by identifying existing bicycle facilities, evaluating the accessibility of surrounding destinations, bicycle facility continuity, and route attractiveness. Table 7 lists the recommended bicycle lane and bike path improvements, and these suggested improvements are depicted in Figures 16A through 16D.
## Table 7: Recommended Bicycle Lane Improvements

<table>
<thead>
<tr>
<th>Improvement Number</th>
<th>Location</th>
<th>Begin</th>
<th>End</th>
<th>Description</th>
<th>Potential improvements</th>
<th>Lead Responsible Agency</th>
<th>Bike Group Served</th>
<th>Explanation</th>
<th>Figure Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>US 17</td>
<td>MP. 10.503</td>
<td>MP. 11.753</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16D</td>
</tr>
<tr>
<td>2</td>
<td>US 17</td>
<td>MP. 15.292</td>
<td>MP. 21.300</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16B/16C</td>
</tr>
<tr>
<td>3</td>
<td>US 17 SB</td>
<td>MP. 0.776</td>
<td>MP. 2.164</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16C</td>
</tr>
<tr>
<td>4</td>
<td>US 17 SB</td>
<td>MP. 3.313</td>
<td>MP. 3.539</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16A</td>
</tr>
<tr>
<td>5</td>
<td>US 17 NB</td>
<td>MP. 0.000</td>
<td>MP. 0.364</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16A</td>
</tr>
<tr>
<td>6</td>
<td>US 17 NB</td>
<td>MP. 0.488</td>
<td>MP. 0.860</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16A</td>
</tr>
<tr>
<td>7</td>
<td>US 17 NB</td>
<td>MP. 1.142</td>
<td>MP. 3.468</td>
<td>Widen Shoulder</td>
<td>Extend outside shoulder north and south along US 17 to make it fivel (5) feet.</td>
<td>FDOT District 1</td>
<td>Group A</td>
<td></td>
<td>16C</td>
</tr>
<tr>
<td>8</td>
<td>CR 35A</td>
<td>SR 64</td>
<td>Stenstrom Road</td>
<td>Add 5' Shoulder</td>
<td>Add five (5) foot outside shoulder along both sides CR 35A.</td>
<td>Hardee County</td>
<td>Group A</td>
<td></td>
<td>16C</td>
</tr>
<tr>
<td>9</td>
<td>CR 35A</td>
<td>Stenstrom Road</td>
<td>Grimes Road</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>Hardee County</td>
<td>Group B/C</td>
<td></td>
<td>16C</td>
</tr>
<tr>
<td>10</td>
<td>Stenstrom Road</td>
<td>Altman Road</td>
<td>US 17 SB</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>City of Wauchula</td>
<td>Group B/C</td>
<td></td>
<td>16C</td>
</tr>
<tr>
<td>11</td>
<td>Church Avenue</td>
<td>Banana Street</td>
<td>CR 664</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>City of Bowling Green</td>
<td>Group B/C</td>
<td></td>
<td>16B</td>
</tr>
<tr>
<td>12</td>
<td>CR 664</td>
<td>Bowling Green City Limit</td>
<td>Lake Branch Road</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>Hardee County</td>
<td>Group B/C</td>
<td></td>
<td>16B</td>
</tr>
<tr>
<td>13</td>
<td>Hardee Street</td>
<td>US 17</td>
<td>CR 664 A</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>City of Bowling Green</td>
<td>Group B/C</td>
<td></td>
<td>16B</td>
</tr>
<tr>
<td>14</td>
<td>CR 664A</td>
<td>Hardee Street</td>
<td>Park Entrance Road</td>
<td>Add 5 Bike Lane</td>
<td>Add five (5) foot bike line with pavement markings and bike lane designation signage.</td>
<td>Hardee County</td>
<td>Group B/C</td>
<td></td>
<td>16B</td>
</tr>
</tbody>
</table>
| 15                 | CR 664   | CR 663 | Bowling Green City Limit | Add 5 Shoulder | Add five (5) foot shoulder to the outside along CR 664. | Hardee County | Group A | A. Low volume roadway  
B. Connects City of Bowling Green to Hardee Lakes | 16B          |
| 16                 | School House Road | SR 66 | SR 64 | Add 5 Bike Lane | Add five (5) foot bike line with pavement markings and bike lane designation signage. | Town of Zolfo Springs | Group B/C |                      | 16D          |
| 17                 | SR 64    | MP. 16.414 | MP. 16.674 | Add 5 Shoulder | Add five (5) foot shoulder to the outside along SR 64. | FDOT District 1 | Group B/C |                      | 16D          |
| 18                 | SR 66    | MP. 0.000 | MP. 0.594 | Add Bike Lane Pavement | Add five (5) foot bike line with pavement markings and bike lane designation signage. | FDOT District 1 | Group A |                      | 16D          |
Pedestrian Sidewalk Improvements

The purpose of these recommendations is to accommodate and support existing pedestrians, and to identify where to create connections between existing and planned sidewalks where necessary to complete the pedestrian network. Table 8 lists the recommended sidewalk improvements and are illustrated in Figures 17A through 17C. These recommendations address the existing deficiencies in the pedestrian network that were identified using the GIS geodatabase developed for this project, numerous field visits, and engineering judgment.
<table>
<thead>
<tr>
<th>Improvement Number</th>
<th>Location</th>
<th>Begin</th>
<th>End</th>
<th>Description</th>
<th>Recommended Improvement</th>
<th>Lead Responsible Agency</th>
<th>Explanation</th>
<th>Figure Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central Avenue</td>
<td>Pineapple Street</td>
<td>Banana Street</td>
<td>Sidewalk</td>
<td>Extend the sidewalk on west side of Central Avenue between Pineapple Street and Banana Street.</td>
<td>City of Bowling Green</td>
<td>Provides north-south pedestrian path parallel to US 17 for the residential communities on the east side of US 17.</td>
<td>17B</td>
</tr>
<tr>
<td>2</td>
<td>Chester Avenue</td>
<td>Main Street (CR 664)</td>
<td>Lemon Street</td>
<td>Sidewalk</td>
<td>Extend the sidewalk on east side of Chester Avenue between Main Street and Lemon Street.</td>
<td>City of Bowling Green</td>
<td>Provides north-south pedestrian path parallel to US 17 for the residential communities on the west side of US 17.</td>
<td>17B</td>
</tr>
<tr>
<td>3</td>
<td>US 17 at Hardee Street</td>
<td>-</td>
<td>-</td>
<td>Signalized Intersection</td>
<td>Conduit Signal Warrant Study at US 17 at Hardee Street.</td>
<td>FDOT District 1</td>
<td>This intersection is near residential neighborhoods and two pedestrian fatalities occurred near the intersection attempting to cross US 17.</td>
<td>17B</td>
</tr>
<tr>
<td>4</td>
<td>W. Orange Avenue</td>
<td>9th Avenue</td>
<td>US 17</td>
<td>Sidewalk</td>
<td>Extend the sidewalk on the north side of W. Orange Street between 9th Avenue and US 17.</td>
<td>City of Wauchula</td>
<td>Many public service facilities are located along this corridor.</td>
<td>17A/17C</td>
</tr>
<tr>
<td>5</td>
<td>Melendy Street</td>
<td>10th Avenue</td>
<td>7th Avenue</td>
<td>Sidewalk</td>
<td>Construct sidewalk on the south side of Melendy Street between 10th Avenue to 7th Avenue.</td>
<td>City of Wauchula</td>
<td>This improvement would provide an east-west travel path for residential communities between Bay Street and Carlton Street.</td>
<td>17A/17C</td>
</tr>
<tr>
<td>6</td>
<td>7th Avenue</td>
<td>Stenstrom Street</td>
<td>Bay Street</td>
<td>Sidewalk</td>
<td>Construct sidewalk on the west side of 7th Avenue between Carlton Street to Bay Street.</td>
<td>City of Wauchula</td>
<td>7th street is runs north-south between Bay Street and Carlton Street. There are retail attractors along this segment and would be a safe route for pedestrians to use instead of US 17.</td>
<td>17C</td>
</tr>
<tr>
<td>7</td>
<td>10th Avenue</td>
<td>Carlton Street</td>
<td>Melendy Street</td>
<td>Sidewalk</td>
<td>Extend the sidewalk on the west side of 10th Avenue between Carlton street to Melendy Street.</td>
<td>City of Wauchula</td>
<td>This improvement would provide a north-south connector for students of the wauchula Elementary School.</td>
<td>17A/17C</td>
</tr>
<tr>
<td>8</td>
<td>Stenstrom Road</td>
<td>Florida Avenue (CR 35A)</td>
<td>US 17</td>
<td>Sidewalk</td>
<td>Construct sidewalk on the north side of Stenstrom Road between Florida Avenue to US 17</td>
<td>City of Wauchula</td>
<td>Stenstrom Road is major access route for the Sunrise community (residential and habilitation services for people with a wide range of intellectual and physical disabilities) and Florida Hospital Wauchula.</td>
<td>17A/17C</td>
</tr>
<tr>
<td>9</td>
<td>8th Avenue</td>
<td>Palmetto Street</td>
<td>Oak Street</td>
<td>Sidewalk</td>
<td>Extend the sidewalk on east and west sides of 8th Avenue between Palmetto Street to Oak Street</td>
<td>City of Wauchula</td>
<td>This improvement recommended to provide access the Oak Street park.</td>
<td>17A/17C</td>
</tr>
<tr>
<td>10</td>
<td>SR 62</td>
<td>County Manor Apartments</td>
<td>Hilltop Elementary School</td>
<td>Sidewalk</td>
<td>Construct a Sidewalk 5 on SR 62 and US 17</td>
<td>FDOT District 1</td>
<td>This improvement would allow travel path for Students of Hilltop Elementary/Hardee Junior High School residing in the County Manor Apartment community</td>
<td>17A</td>
</tr>
</tbody>
</table>
**Recommended Policies**

The Goals and Policies in the currently adopted Comprehensive Plans of Hardee County, the Cities of Bowling Green and Wauchula, and the Town of Zolfo Springs are very supportive of developing a safe bicycle/pedestrian-friendly environment.

In addition to the list of bicycle lane and sidewalk improvements identified in the previous sections, the following general action items are recommended:

1) Design sidewalks that are enjoyable to walk along and that acknowledge their multi-functional purposes. Provide landscaped sidewalk buffers and urban design features, especially in the areas of high pedestrian activity, in order to encourage walking. Improve the street-level experience for pedestrians, including the addition of appropriate landscaping and trees to provide shade and enhance streetscape appearance. This includes amenities such as tree wells, pedestrian seating, and waste containers.

2) Implement programs that encourage walking and using bicycles. Currently there are no educational awareness programs adopted by Hardee County, the Cities of Bowling Green and Wauchula, the Town of Zolfo Springs, or the Hardee County School Board. The goals for the walking and bicycle awareness programs should reflect its benefits and contribution to the social cohesion of the community.

3) Provide at least one event annually that promotes the bicycle/pedestrian safety, such as a “Walk or Bike to School Day”.

4) Develop educational materials and promote the bicycle/pedestrian awareness in close collaboration with Hardee County School Board and local law enforcement agencies.

5) Continually improve bicycling and walking comfort and safety through design, operations and maintenance including development of facilities to attract use by new bicyclists.

6) Ensure that the transportation system is accessible to people with physical disabilities and that an ADA transition is completed to identify any existing or potential obstacles to access, develop a plan to remove those obstacles, and identify responsible parties.
7) Ensure the provision of high quality, flexible and secure bicycle parking at all destinations and ensure that bicycle parking is considered when parks, schools, and other public facilities are planned.

8) Provide incentives for existing businesses and other entities to add secure bicycle parking facilities and pedestrian amenities.

**Conclusion**

This Master Plan recognizes the need for an integrated bicycle and pedestrian transportation network system to improve personal mobility and accessibility. The programmed sidewalk and bicycle lanes that will be constructed through roadway improvements projects will fill a portion of the identified gaps in the network system. The recommend list of sidewalk and bicycle lane projects are suggested to fill in the remaining gaps in the network system. The successful implementation of this Master Plan is dependent upon creating a quality environment that is conducive to these travel modes. The current Goals and Policies incorporated in the Land Development Codes and the respective Comprehensive Plans of Hardee County, the Cities of Bowling Green and Wauchula, and the Town of Zolfo Springs are written to be supportive of livable community design standards.

Hardee County should engage in cooperative efforts with the municipalities within the County and the Hardee County School Board to develop educational awareness program to educate the public about traffic laws, safe bicycle riding techniques, and pedestrian safety walking to schools. These programs should develop and implement public information campaigns in targeted areas with higher than statistical average crashes related to speeding (automobiles), and should develop and implement public information campaigns targeted to inform the public about the importance of yielding the right-of-way to pedestrians and emergency vehicles.