Traffic Safety Study Report

City Wide Intersection Study
City of Coconut Creek
Broward County, Florida

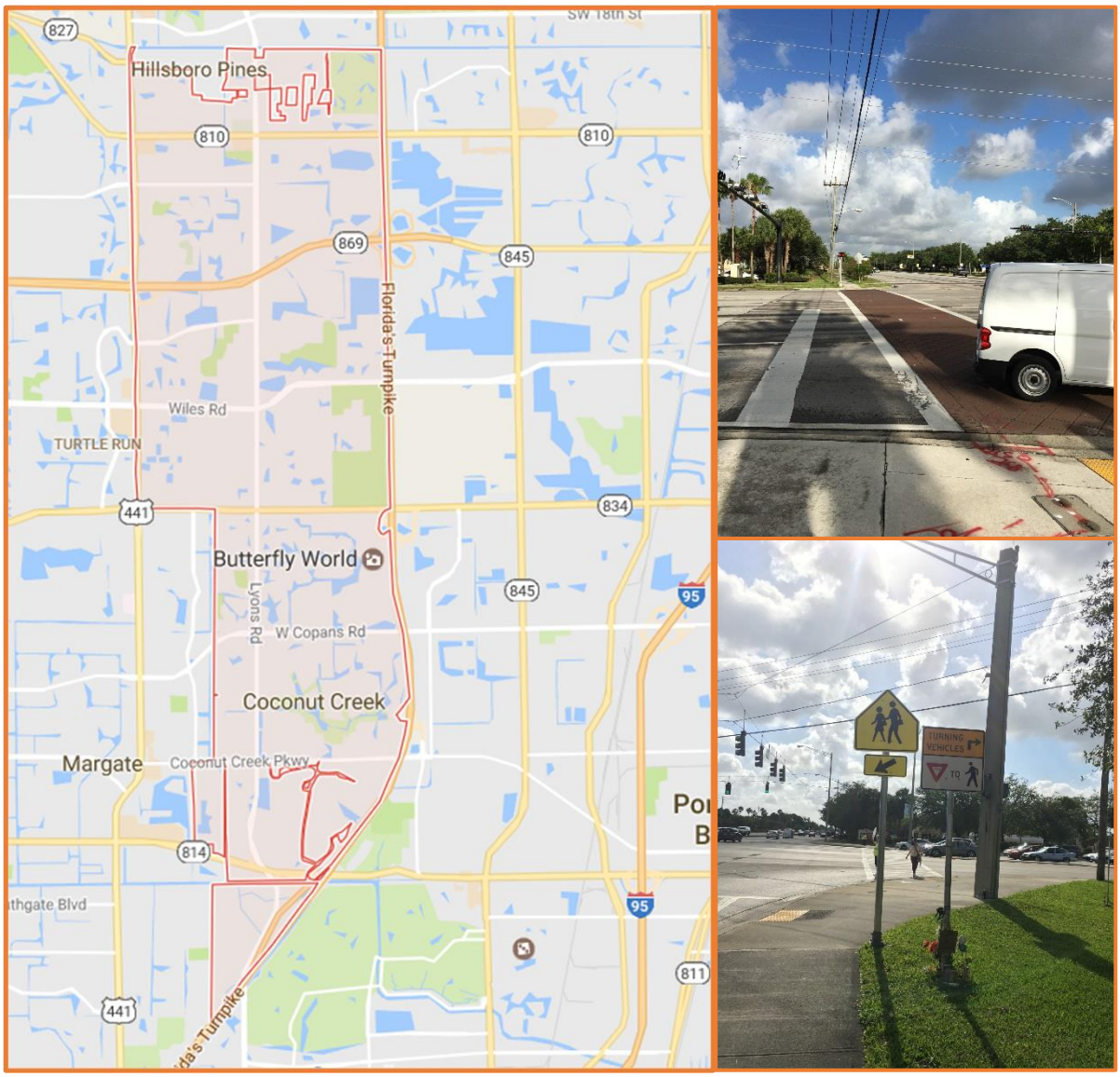

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TABLE OF CONTENTS

1. Introduction

The City of Coconut Creek is facing a city-wide roadway safety challenge which is caused by right-of-way vendors or solicitors at the signalized intersections. Right-of-way vendor or solicitors refers to any person who sells or offers anything including a service for sale or for free to any person who operates or occupies a motor vehicle which travels on the roadway system in the city. These individuals pose a danger to themselves and the general public by interfering with the safe and efficient movement of vehicular and pedestrian traffic at such intersections.

According to Florida's Integrated Report Exchange System, the Florida Department of Highway Safety and Motor Vehicles reported that, on a statewide basis, four hundred ninety-eight (498) pedestrians were killed in motor vehicle accidents in 2011, four hundred seventy-six (476) were killed in 2012, four hundred ninety-nine (499) were killed in 2013, and six hundred two (602) were killed in 2014, for a total of two thousand seventy-five (2,075) pedestrians killed in motor vehicle accidents in the four (4) years study period. During the same period, one hundred ninety-seven (197) pedestrians were killed in motor vehicle accidents in Broward County.

Reason for the Investigation

The identification of intersections within the roadway system of Coconut Creek that present potentially higher risk to pedestrian safety is the critical step to assist the City in developing an ordinance to restrict right-of-way vendors or solicitors. The roadway corridors located along State Route 7(SR-7)/US-441 and Lyons Road within the City represent one such opportunity, particularly due to the high density of commercial access points along SR-7 and Lyons Road.

2. Study Objectives

The objectives of this traffic safety study include:

- Analyze the historical traffic crash data for the outlined 22 intersections (as shown in Figure 1) to identify the total number of crashes between fiscal year 2011 to 2016;
- Investigate physical and operational issues in the field that may affect traffic safety and pedestrian safety; and
- Develop and evaluate potential countermeasures to reduce the frequency and severity of auto crashes and pedestrian involved crashes.

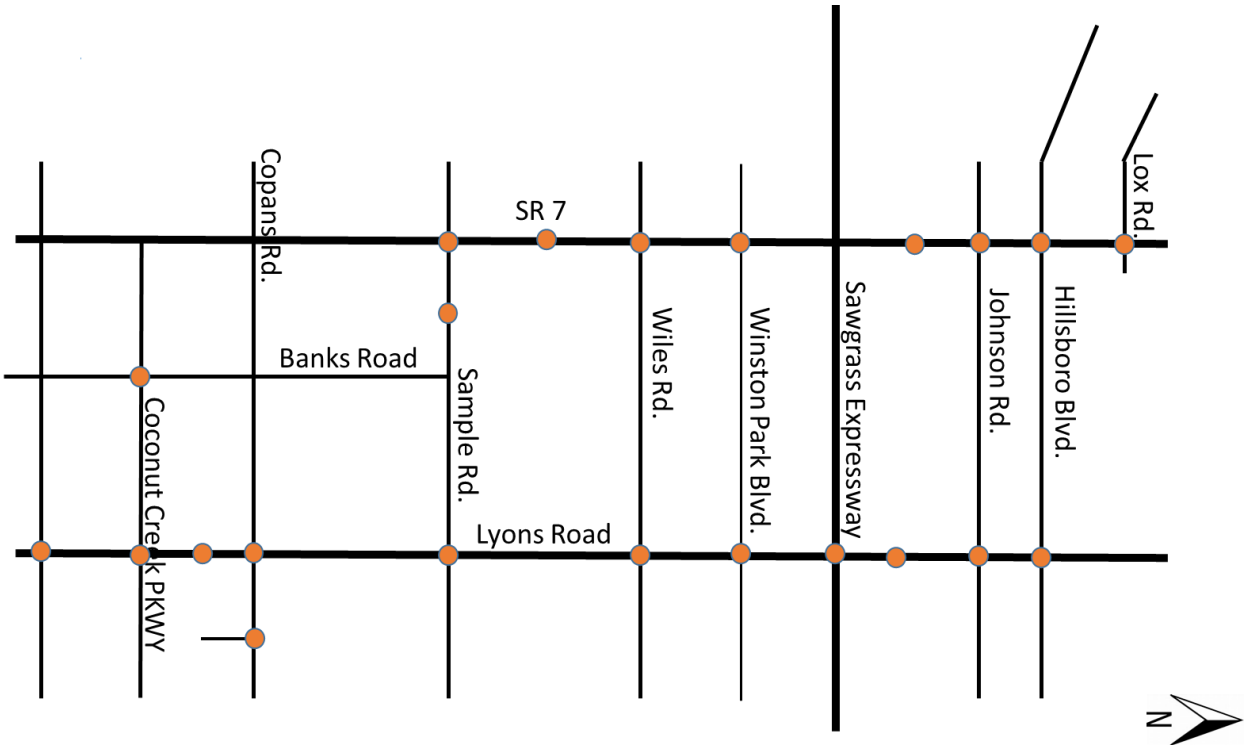

Figure 1 Traffic Safety Study Area

3. Preliminary Data Analysis

The crash data between fiscal year 2011 and 2016 at those 22 intersections was obtained from the FIRES database which is maintained by Florida Department of Highway Safety and Motor Vehicles. The crash data was analyzed and categorized based on type of intersection, type of crashes and pedestrian involved incidents as shown in Table 1. The intersection list is sorted based on the total number of crashes between 2011 – 2016. Targeting the 22 intersections for the study area, the pedestrian involved incidents are also shown in Table 1. Of the 22 targeted intersections, 11 of them have accidents involving one or more pedestrian as highlighted.

The intersection 2016 Annual Average Daily Traffic Volumes (AADT) reported by FDOT Traffic Online Database are also listed in Table 1 for the major intersections (State Routes and major corridors).

With the preliminary analysis, based on the total number of crashes and number of pedestrian involved during the last 5 years, it is concluded that right-of-way vendors or solicitors are particularly susceptible and vulnerable to get seriously injured or killed at the following 10 intersection due to the intersection performance and high volume of traffic. A field investigation was performed at those intersections during the AM peak hours.

- Sample Rd. @ Lyons Road
- Atlantic Blvd. @ Lyons Road
- Wiles Rd. @ SR 7

Table 1 - Summary of Crash Data (2011 - 2016)

Intersection	Front to Rear	Front to Front	Angle	Sideswipe Same Direction	Sideswipe Opposite Direction	Rear to Side	Rear to Rear	Other	Unknown	Total Number of Crashes	Pedestrian Involved	FDOT Intersection 2016 AADT
Sample Rd. @ Lyons Road	235	2	85	27	1	0	1	18	108	**477**	1	**100500**
Atlantic Blvd. @ Lyons Road	185	2	68	32	0	0	0	34	102	**423**	1	**87500**
SR 810 (Hillsboro Blvd.) @ SR 7	154	2	62	16	0	0	0	21	90	**378**	0	**86500**
Wiles Rd. @ SR 7	197	5	65	39	0	1	0	18	49	**374**	1	**85000**
Coconut Creek PLWY @ Lyons Road	138	6	86	26	0	1		30	79	**366**	6	**58500**
Copans Rd. @ Lyons Road	176	2	47	14	2	0	0	15	94	**350**	1	**74500**
Wiles Rd. @ Lyons Road	115	3	65	9	2	0	1	25	75	**295**	3	**76000**
SR 810 (Hillsboro Blvd.) @ Lyons Road	114	1	58	15	2	1	0	19	63	**273**	4	**81500**
Sample Rd. @ NW 54th Ave	122	4	44	13	0	0	0	14	59	**256**	2	**69100**
Winston Park Blvd. @ Lyons Road	80	0	77	9	0	0	0	13	66	**245**	1	N/A
Johnson Road @ SR 7	95	0	23	3	0	0	0	6	50	**208**	0	**75900**
Regency Lakes Blvd. @ SR 7	93	0	52	7	0	0	0	10	25	**187**	0	N/A
Sawgrass Blvd-Serko Blvd. @ Lyons Road	53	1	48	6	1	0	0	14	42	**165**	0	N/A
Sample Rd. @ SR 7	62	3	13	21	0	0	0	15	20	**134**	0	**95000**
Bank Rd. @ Coconut Creek Parkway	37	1	42	2	0	0	0	5	35	**122**	1	**68900**
SR 869 (Sawgrass Expressway) @ Lyons Road	44	3	44	4	0	0	0	5	11	**111**	0	**54600**
Copans Rd. @ NW 36th Ave	45	0	14	3	0	0	0	5	28	**95**	0	N/A
Johnson Road @ Lyons Road	38	2	15	2	0	0	0	5	21	**83**	0	**58000**
Lox Road @ SR 7	23	1	6	4	0	0	0	2	2	**49**	0	**67700**
Hammocks Blvd. @ Lyons Road	19	0	8	0	0	0	0	1	8	**36**	1	N/A
Winston Park Blvd. @ SR 7	14	1	5	3	0	0	0	4	7	**34**	0	N/A
Cullum Rd. @ SR 7	10	0	1	4	0	0	0	5	0	**20**	0	**67400**

- Coconut Creek PKWY @ Lyons Road
- Copans Rd. @ Lyons Road
- Wiles Rd. @ Lyons Road
- SR 810 (Hillsboro Blvd.) @ Lyons Road
- Sample Rd. @ NW 54th Ave
- Winston Park Blvd. @ Lyons Road
- Banks Rd. @ Coconut Creek Parkway

4. Field Investigation

A field investigation was performed to observe the traffic operations during AM peak hour conditions on a regular week day and the evidence such as pedestrian facilities, available sight distances, run-off road evidences, illumination, speed limit, traffic control devices, etc. were documented.

It is noted that school crossing guards are provided at large intersections by the City such as Hillsboro Blvd. @ Lyons Rd. to help pedestrian cross street during school hours as shown in Figure 2. However, not every intersection has pedestrian facilities such as pedestrian warning signs, turning vehicle yield to pedestrian signs, as well as high-visibility cross walks.

According to one of the school crossing guards, many turning vehicles approaching the intersection with high speed pose significant threat to pedestrians, including the crossing guards themselves.

Figure 2 – Intersection Pedestrian Facility

5. Conclusions and Recommendations

(1) The 10 signalized intersections at which site investigation was performed have high crash rates, high volume of traffic, and high speed at which vehicles are traveling. The right-of-way of such intersections is not the appropriate area to safely conduct the activities of right-of-way vendors or solicitors, plus right-of-way vendors or solicitors interfere with safe, efficient and orderly movements of all modes of transportation including vehicular and pedestrian traffic. Therefore, it is recommended that right-of-way

vendors or solicitors activities be prohibited within an intersection and for the distance of two hundred fifty (250) linear feet from the stop bars of the intersection upstream along the middle of any right-of-way leading into such intersection at any of the following intersections:

- Sample Rd. @ Lyons Road
- Atlantic Blvd. @ Lyons Road
- Wiles Rd. @ SR 7
- Coconut Creek PLWY @ Lyons Road
- Copans Rd. @ Lyons Road
- Wiles Rd. @ Lyons Road
- SR 810 (Hillsboro Blvd.) @ Lyons Road
- Sample Rd. @ NW 54th Ave
- Winston Park Blvd. @ Lyons Road
- Banks Rd. @ Coconut Creek Parkway

(2) Pedestrian facilities including advanced warning signs, turning vehicle yield to pedestrian signs, and high-visibility cross walks are recommended to be installed at the 10 signalized intersections listed above to provide safer crossing for the general pedestrian traffic.

(3) The crash data for fiscal year 2011 – 2016 from the FIRES database indicates a high percentage of front to rear crash type. It is recommended that a traffic signal retiming study be performed along Lyons Rd., SR 7, Sample Rd., Atlantic Blvd., Wiles Rd. and Copans Rd. to improve corridor progression and reduce the number of stops.