COLLIER MPO PEDESTRIAN AND BICYCLE SAFETY STUDY

BPCC MEETING 26 NOV 2013

MPO
COLLIER
Metropolitan Planning Organization

Project has 3 tasks:

- Crash report analysis
- Survey to understand unreported bicycle and pedestrian crashes
- Development of a Project Evaluation Matrix

Collier County compared to Florida

	State of Florida		Collier	
	Average (2007 - 2011)	Per 100k Population	Average (2007 - 2011)	Per 100k Population
Pedestrians killed	502	2.67	6	1.74
Pedestrians injured	7313.4	38.90	88	27.43
Bicycle riders killed	106.8	0.57	2	0.62
Bicycle riders injured	4458.2	23.71	94	29.24

* Most recent available statewide data is 2011

** rates based on 2010 census population

Per 100,000: Fewer pedestrians injured or killed, more bicyclists injured or killed

COLLIER COUNTY CRASH REPORT DATA

- Analyzed crash reports from 2008 – 2012
- There were a total of 1,067 reported crashes involving motor vehicles with pedestrians and/or bicyclists.
- Not all crash reports give complete information – missing data sometimes included:
  - Location
  - The age or sex of the people involved was not always given (especially of the bicyclist or pedestrian)
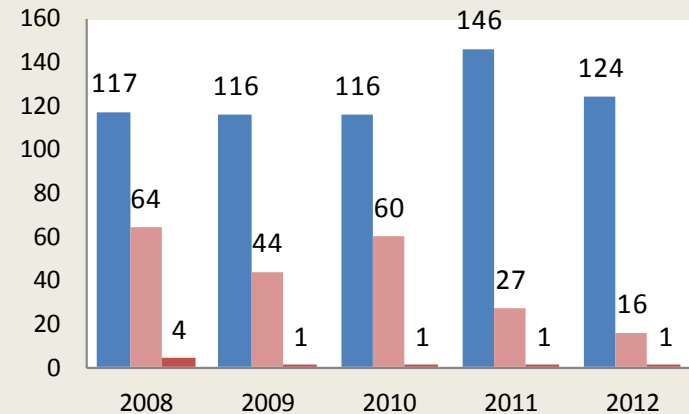 - Direction of travel
  - Cause of crash

The highest number of Pedestrian crashes were reported in 2009 and although 2012's reported crashes were only slightly lower the fatalities in 2012 are at their lowest.

Bicycle crashes decreased from 2011, but are higher than 2008-2010
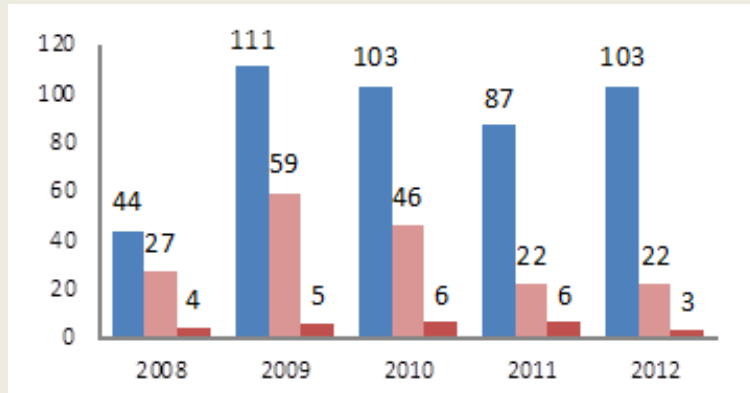
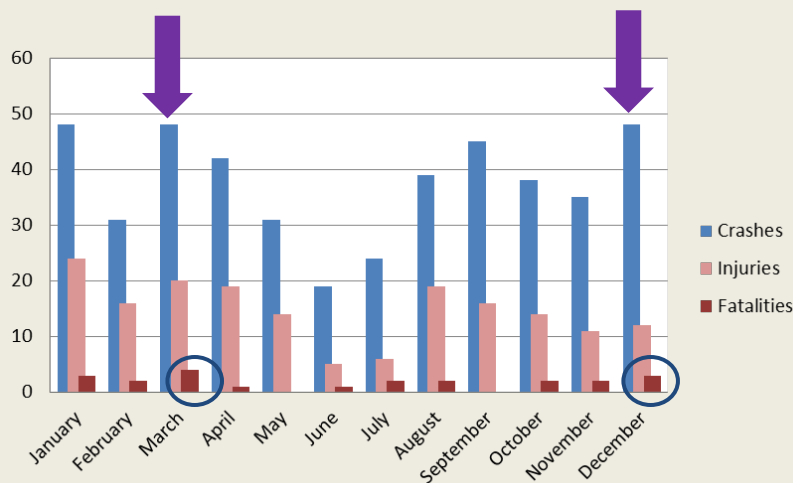Pedestrian crashes by year, 2008-2012

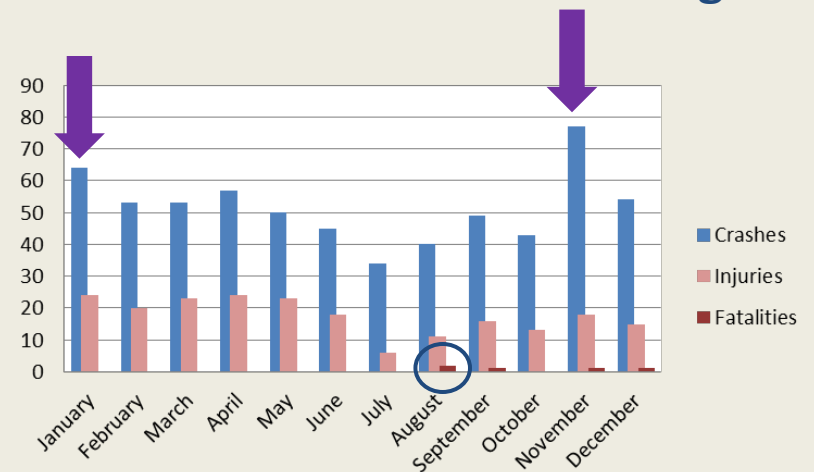Bicycle crashes by year, 2008-2012

Crashes Injuries Fatalities

Pedestrian crashes decrease in the summer months. The worst months for crashes and fatalities are December, January and March.

Bicycle crashes occur more consistently throughout the year, decreasing slightly in the summer months. Most crashes occur in November and January and the most fatal crashes occurred in August.
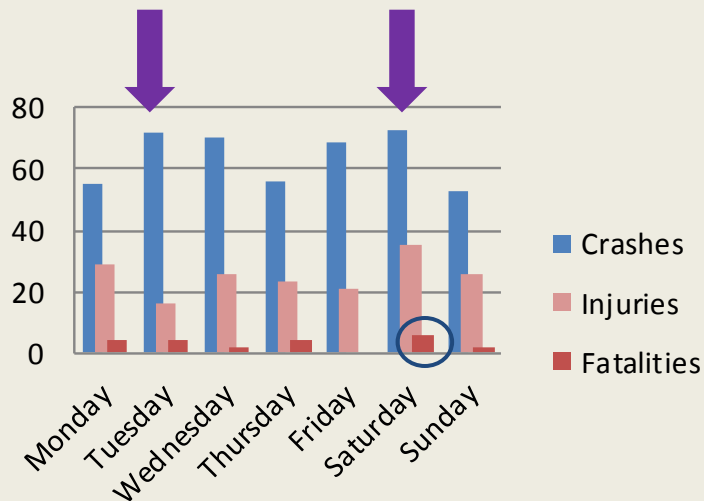

Pedestrian Crashes by Month 2008-2012

Bicycle Crashes by Month 2008-2012
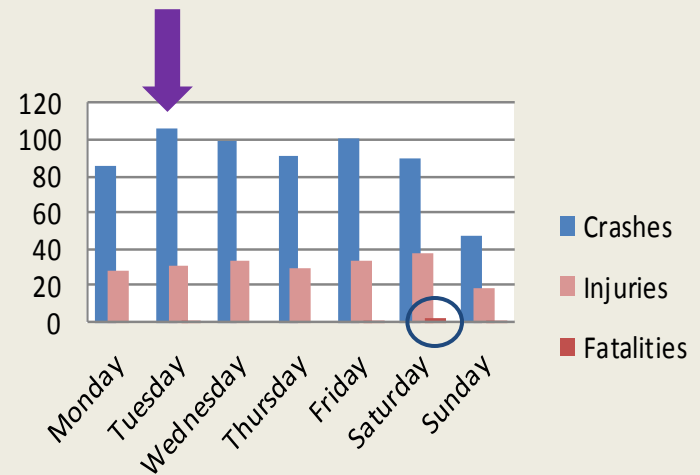
The most pedestrian crashes occur on Tuesday, Wednesday, and on Saturday, with the most injuries and fatal crashes also happening on Saturday.

Bicycle crashes were more likely on Tuesday and least likely Sunday; Injuries occurred throughout the week, with the most injury crashes occurring on Saturdays.
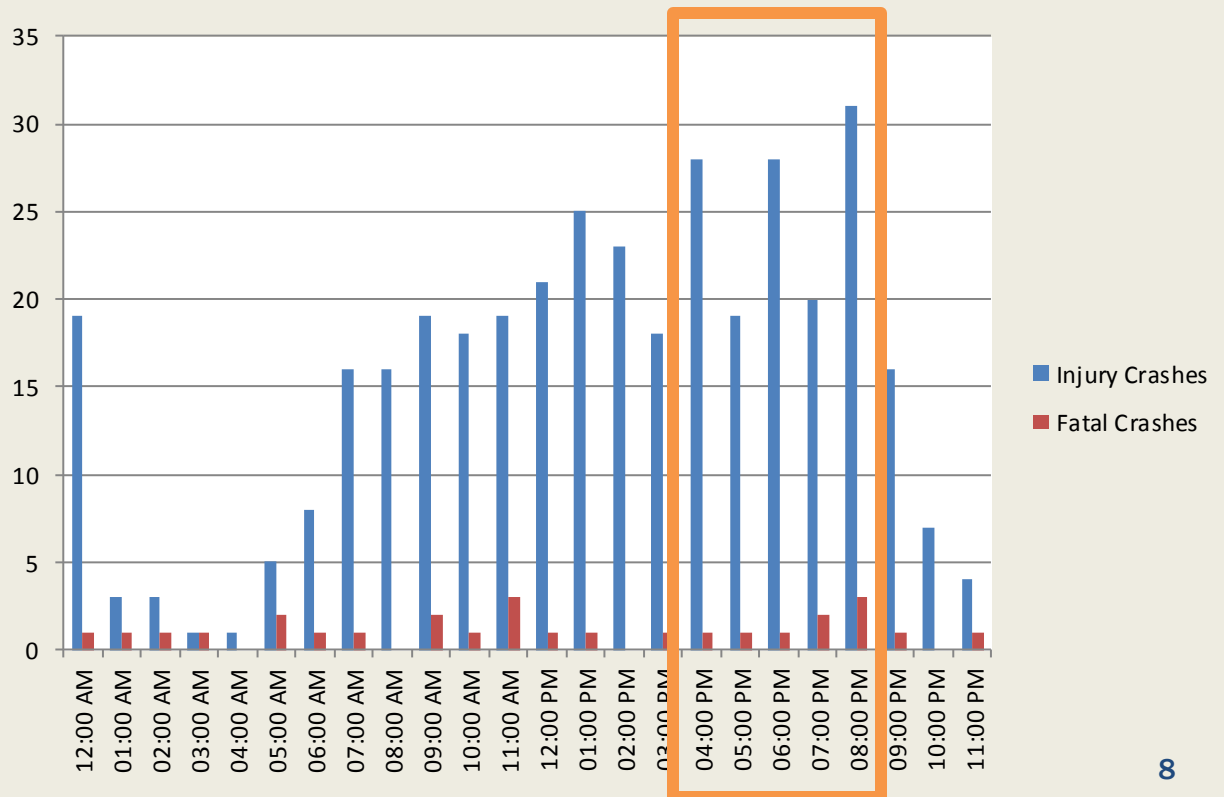

**Pedestrian Crashes by Month 2008-2012**

Bicycle Crashes by Month 2008-2012

The bulk of the crashes in Collier County occur during the day, but there are spikes between 4-5, 6-7 and 8-9pm. The hours between 7-9pm account for 22% of the fatal crashes.


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In Collier County, the age of bicyclists is dispersed fairly evenly throughout all the different ages. 18% of the crashes in Collier County involve adults age 41-50. Additionally, 17% of children between 11 and 20 are in bicycle crashes. Seniors (ages 61-80) are in 12% of the crashes.
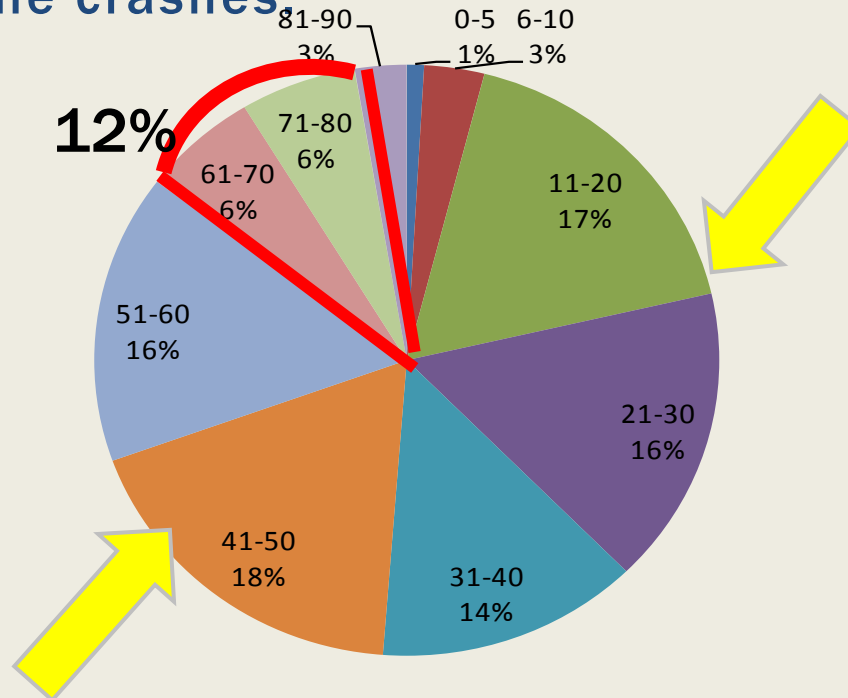
In Collier County, the age groups are almost equally represented. However, the highest percentage group is children between ages 11- 20, at 18%, followed by adults between ages 41 and 50 at 17%.
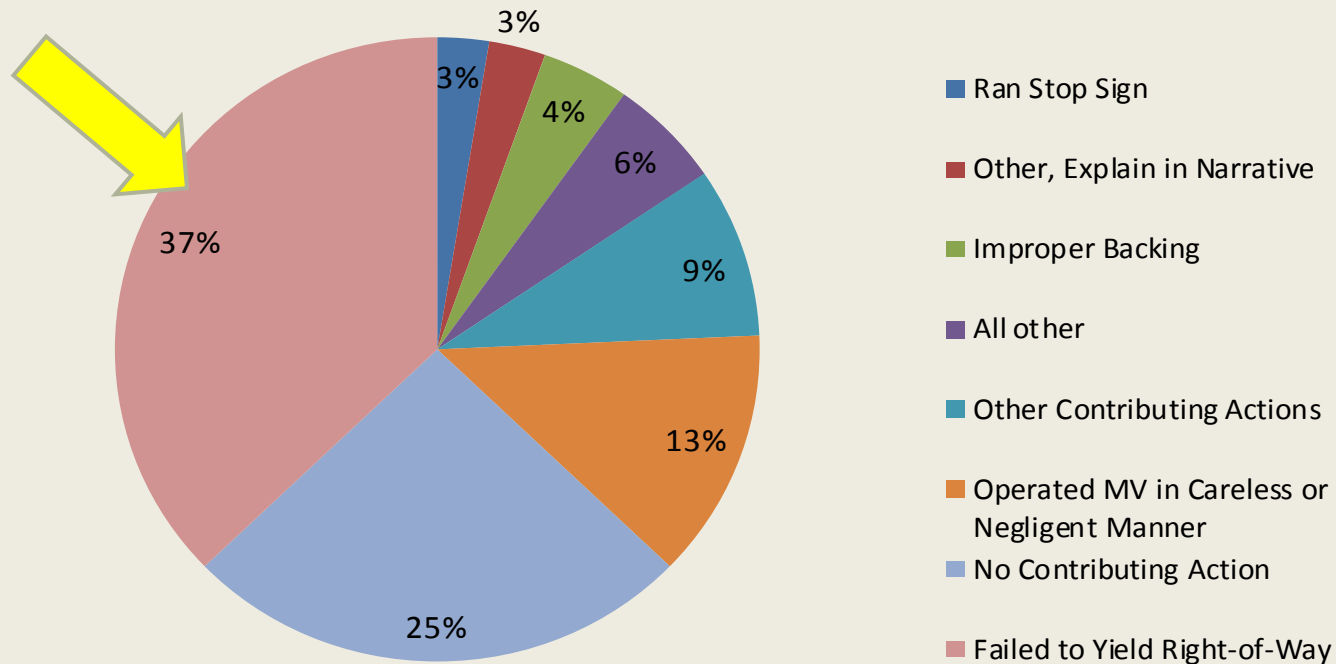
14%

81-90
3%

0-5
3%

6-10
5%

11-20
18%

71-80
7%

61-70
7%

51-60
12%

21-30
15%

41-50
17%

31-40
13%

10
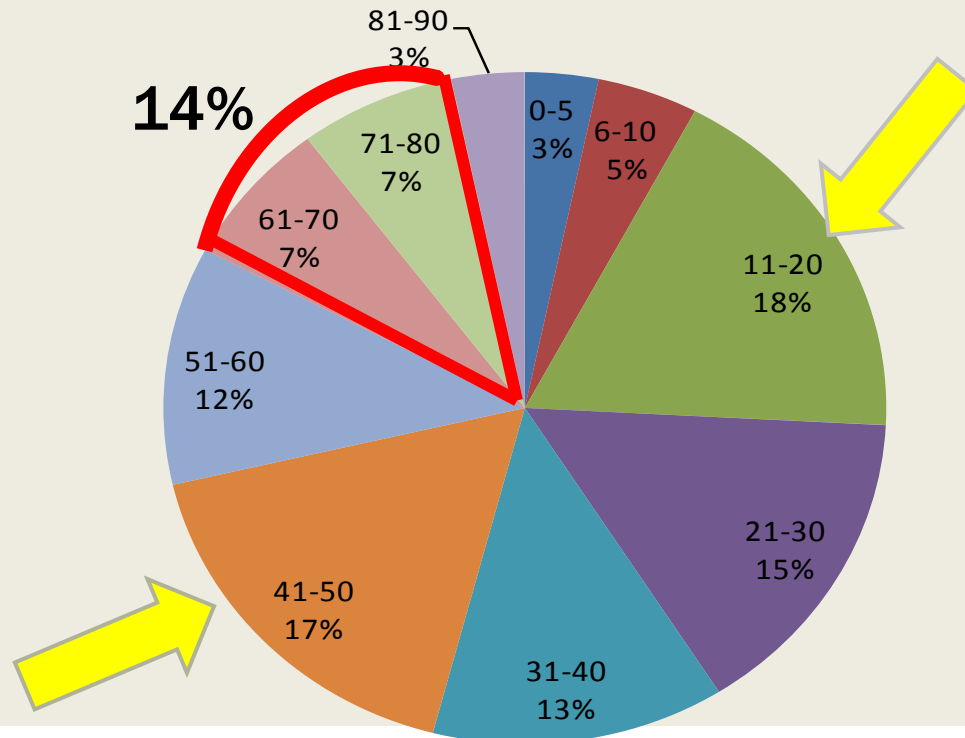
ANALYSIS SUMMARY-
CRASH LOCATIONS

43% of the crashes reporting a specific location between 2008 and 2012 occurred in Naples. 72% of the crashes occurred in Naples, East Naples and North Naples. 14% occurred in Immokalee. 21 % of the crashes reports did not specify a location.
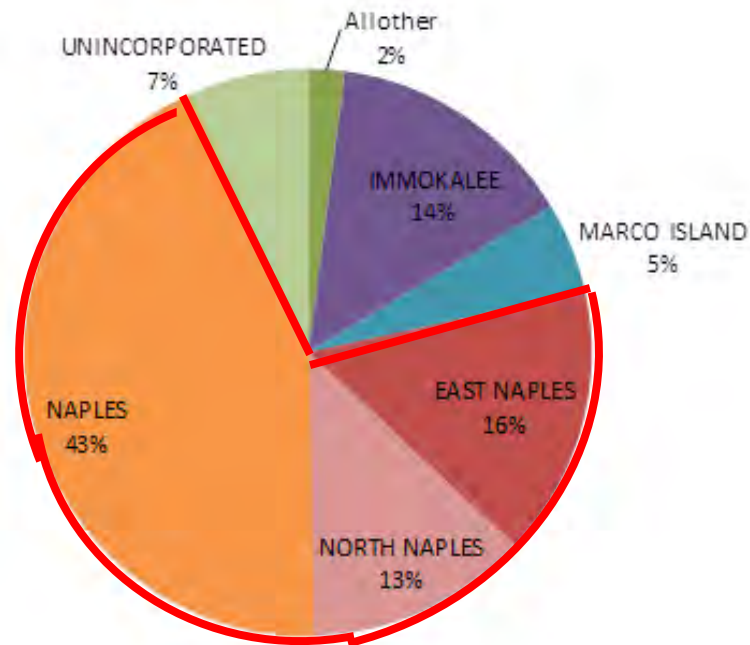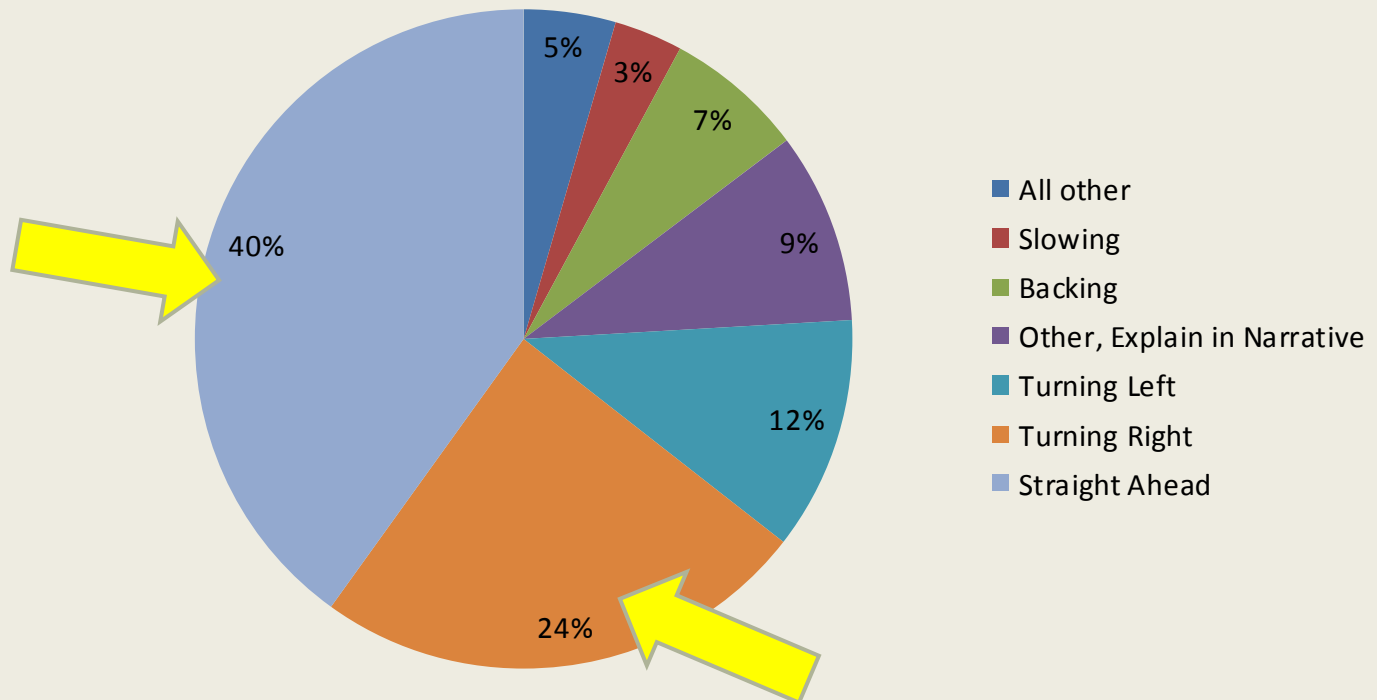
In Collier County the most frequently reported crash cause is the motor vehicle *Failure to Yield the Right-of-Way*. There were 144 (37%)reported instances of this cause.


Legend:
- Ran Stop Sign
- Other, Explain in Narrative
- Improper Backing
- All other
- Other Contributing Actions
- Operated MV in Careless or Negligent Manner
- No Contributing Action
- Failed to Yield Right-of-Way

Pie chart values: 3%, 3%, 4%, 6%, 9%, 13%, 25%, 37%

ANALYSIS SUMMARY-
VEHICLE MOVEMENT

40% of the time the motor vehicle was moving straight ahead. 24% of the crashes occurred when the vehicle was turning right and 12% of the crashes occurred when the vehicle was turning left.
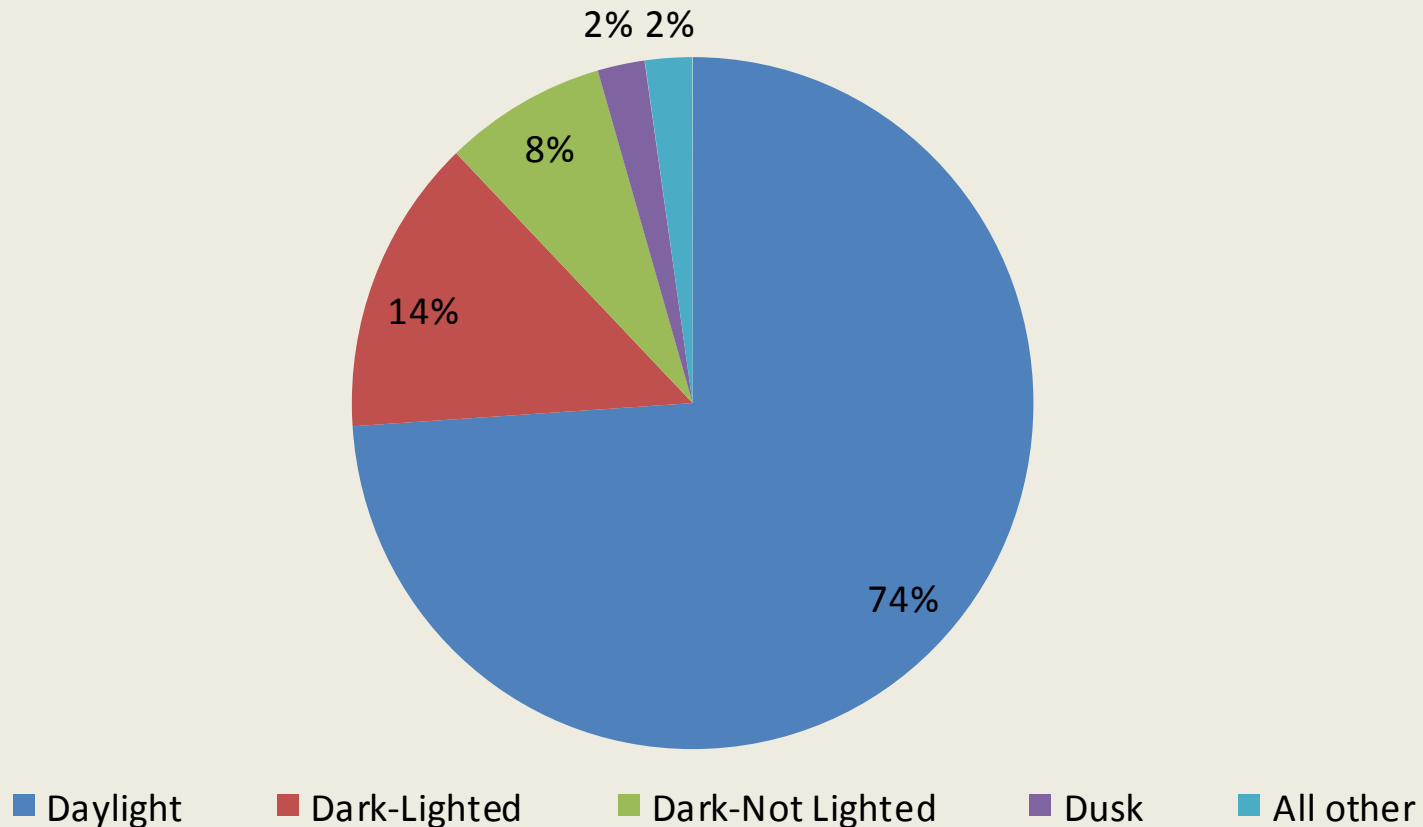

Legend:
- All other
- Slowing
- Backing
- Other, Explain in Narrative
- Turning Left
- Turning Right
- Straight Ahead

Pie chart values: 5%, 3%, 7%, 9%, 12%, 24%, 40%

In the majority of pedestrian or bicycle crashes the weather was noted as clear.

■ Clear   ■ Cloudy   ■ Rain   ■ All other
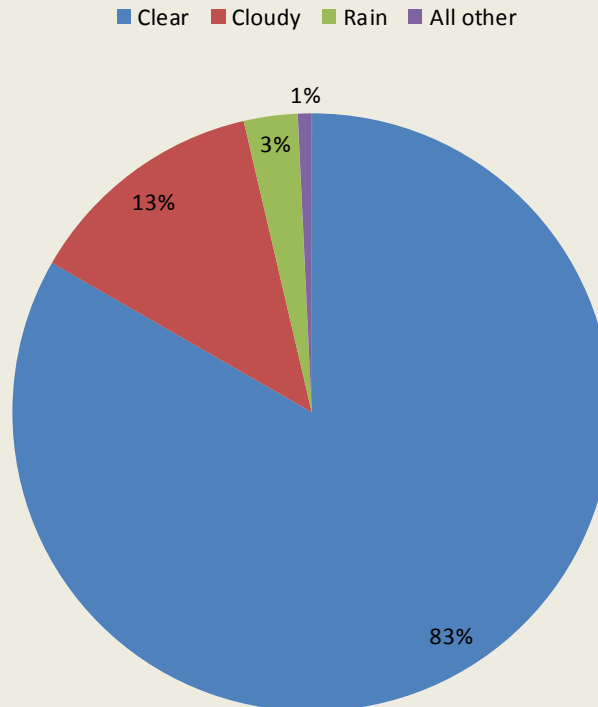
The majority of pedestrian and bicycle crashes in Collier County occur in the daylight.
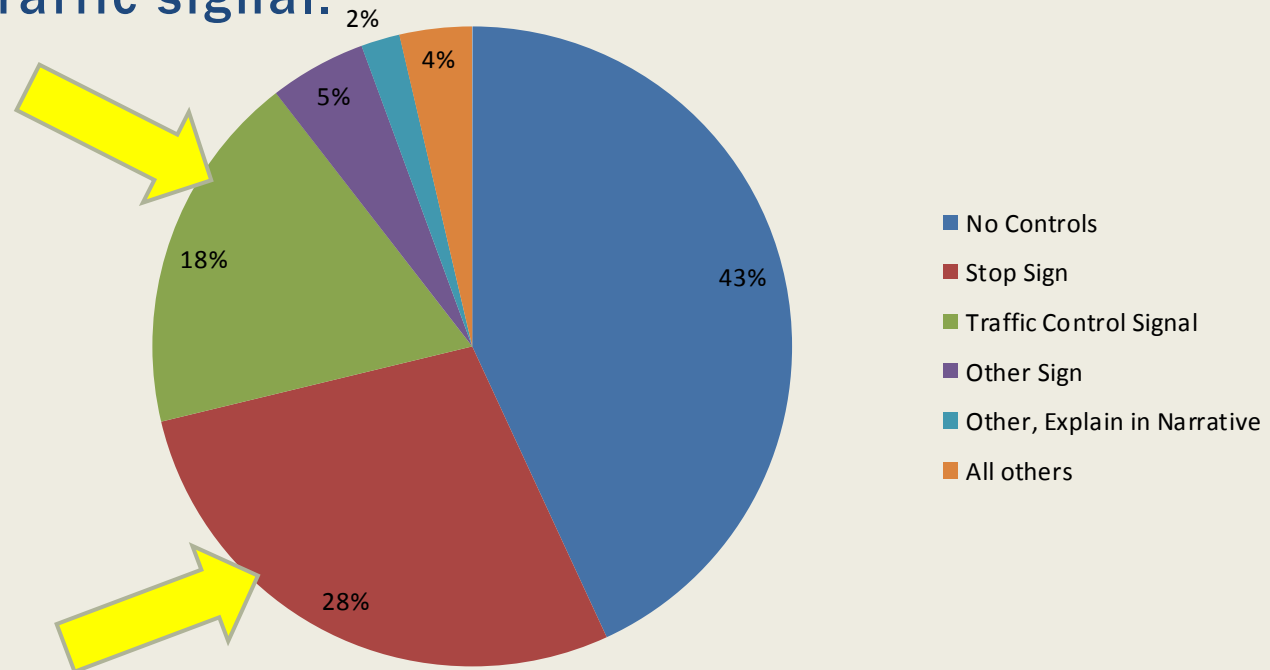

Legend: Daylight · Dark-Lighted · Dark-Not Lighted · Dusk · All other

Most pedestrian or bicycle crashes happened on the roadway. For pedestrians, that typically means they were crossing the roadway at either an unsignalized (midblock) location or at a signalized intersection. In a number of cases, no specific location was noted on the crash report.
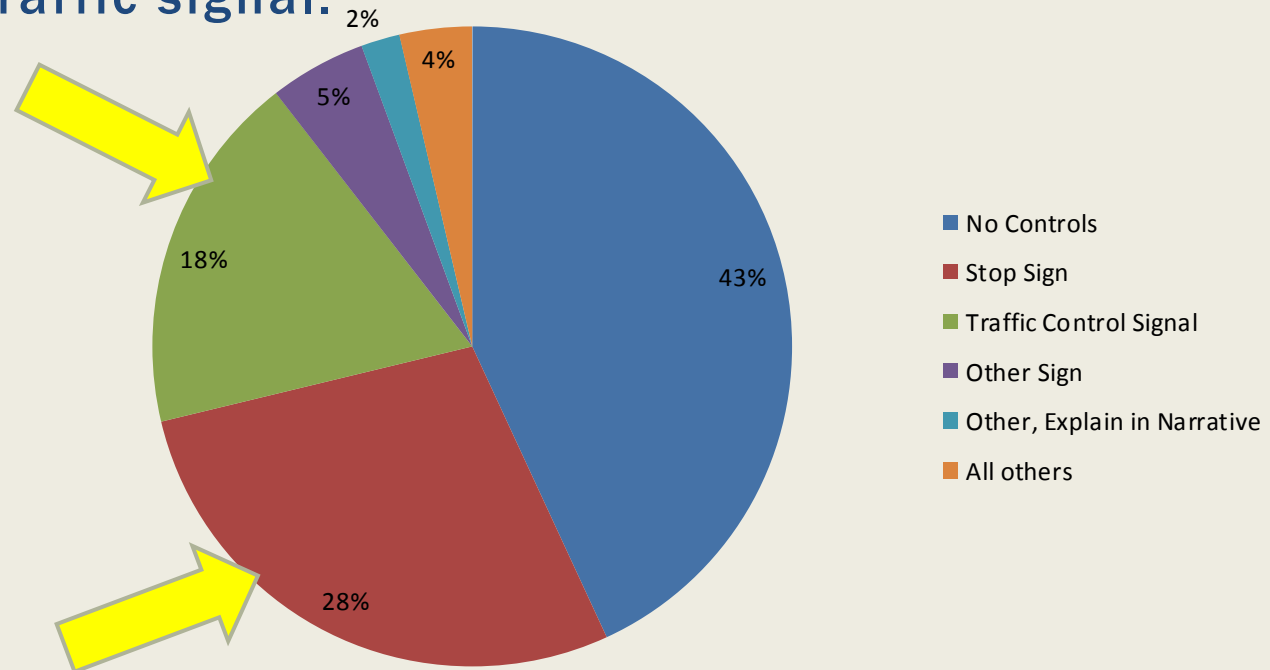

Pie chart legend:
- On Roadway — 80%
- Off Roadway — 10%
- Shoulder — 4%
- In Parking Lane or Zone — 4%
- All other — 2%

In almost half of the crashes in Collier County, there were no traffic control devices at the scene of the crash. This can mean a variety of things including the pedestrian or bicyclist was crossing at mid-block or away from an intersection. In 28% of the cases, there was a stop sign at the crash location and in 18% there was a traffic signal.

- ■ No Controls
- ■ Stop Sign
- ■ Traffic Control Signal
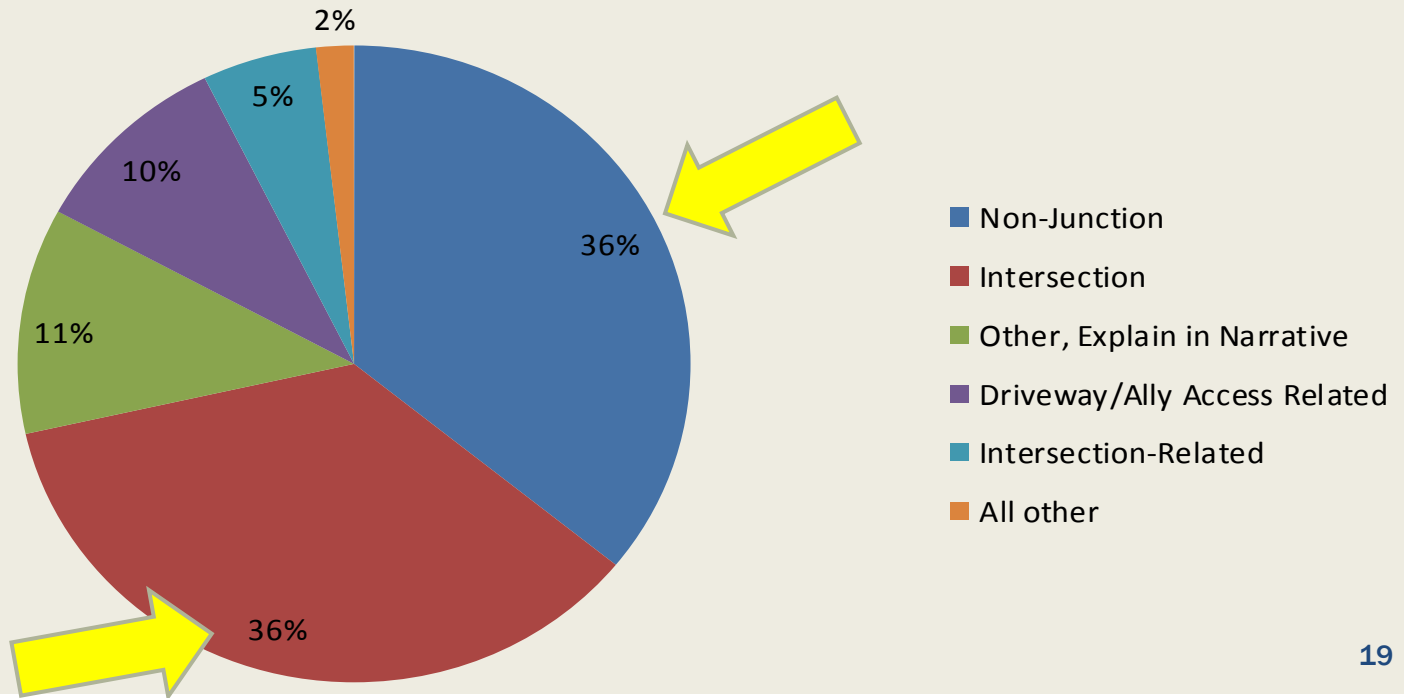- ■ Other Sign
- ■ Other, Explain in Narrative
- ■ All others

In almost half of the crashes in Collier County, there were no traffic control devices at the scene of the crash. This can mean a variety of things including the pedestrian or bicyclist was crossing at mid-block or away from an intersection. In **28%** of the cases, there was a stop sign at the crash location and in **18%** there was a traffic signal.

- No Controls
- Stop Sign
- Traffic Control Signal
- Other Sign
- Other, Explain in Narrative
- All others

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36% of the pedestrian or bicycle crashes happen at an intersection, 36% happened away from the intersection.

Intersection related crashes are typically within the influence area of an intersection, such as where right or left turn lanes are striped. Driveways and alleyways are frequently the location of crashes where the driver didn't see a pedestrian or cyclist approaching from the left as they were attempting to turn onto a major roadway.

Legend:
- Non-Junction
- Intersection
- Other, Explain in Narrative
- Driveway/Ally Access Related
- Intersection-Related
- All other

Pie chart values: 36%, 36%, 11%, 10%, 5%, 2%

40% of the severe injury and fatal crashes occur when the bicyclist is traveling in the same direction as the motor vehicle. 27% of bicyclists were travelling against the direction of traffic and 31% were travelling across the lane.
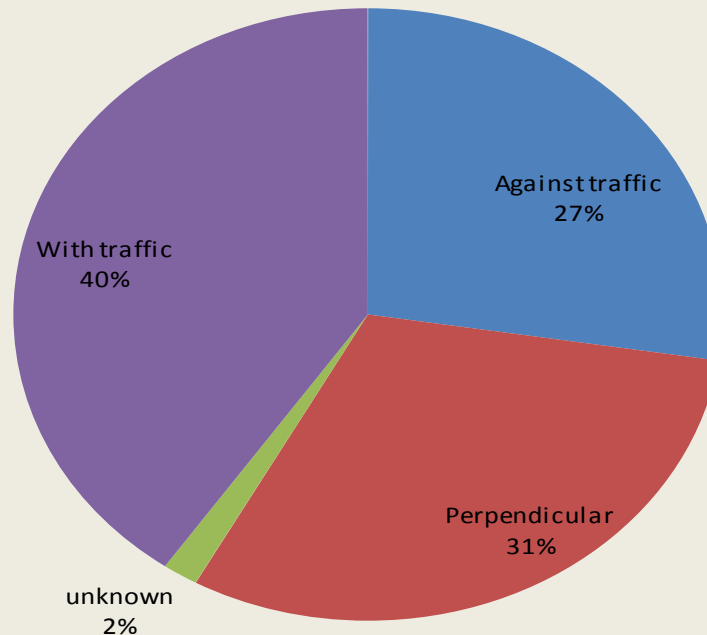
36% of these crashes occurred at unsignalized locations. Of these crashes, of the crashes at unsignalized locations, 77%, of them occurred at midblock

32% of these crashes occurred while the pedestrian was walking along the roadway.

5% of these crashes occurred at a signal.

Parking lot or Other 27%

Walking along the roadway 32%

Crossing at an unsignalized location 36%

Crossing at a signal 5%

21
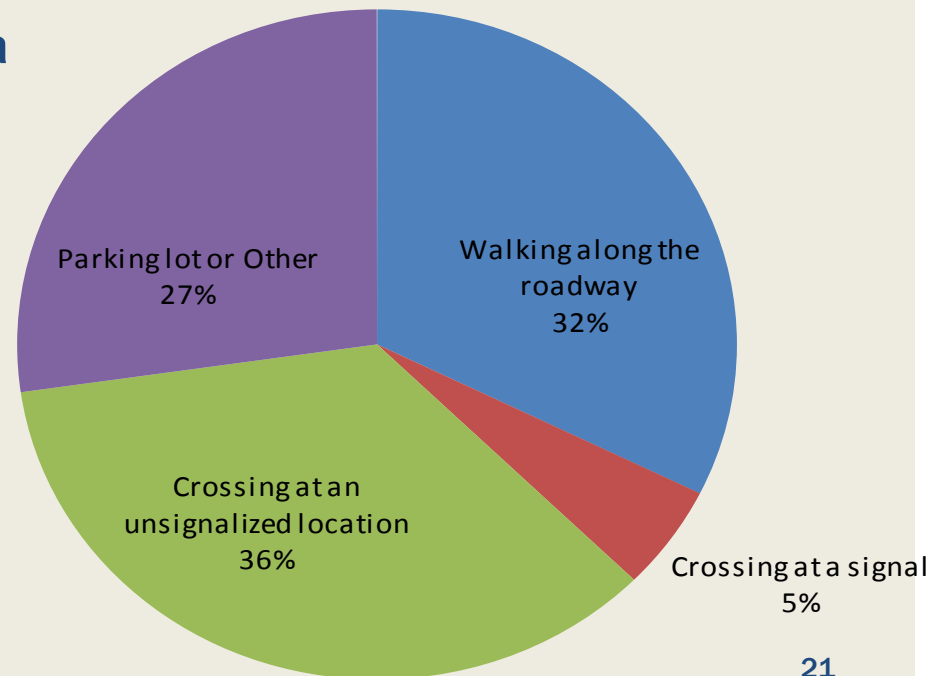
- Some pedestrians and bicyclists experience crashes that do not get documented in a crash report filed by police.

- How common is this in Collier County? The MPO survey tried to determine this.

Survey Objective: gather information on the experiences for pedestrians and bicyclists who have had conflicts with motorists or other pedestrians or bicyclists in Collier County.

SURVEY METHODOLOGY

Survey Goal was to capture those who identify themselves as having been involved in a collision or been forced from their path while walking or bicycling within the past 5 years

- PAC reviewed survey questions at 9/27/13 Workshop.
- Survey was written in Spanish and in English

PEDESTRIAN & BICYCLE SAFETY SURVEY

- We reached out to the Collier Area Transit riders by placing these signs onboard all the buses
- The signs were in both English and Spanish

Do you walk?
Do you bike?

HELP US HELP YOU!

Fill out a Bicycle and Pedestrian Safety Survey

- Administered Oct. 23 – Nov. 6
- Administered in 3 ways:
  - Online (still available today)
  - Surveys available at public facilities (CAT Transfer Station and public libraries and city/county offices)
  - Field surveys in 4 locations identified as high bike/ped crash areas (Immokalee, Golden Gate, Naples Manor & Collier Government Complex)
- In-person surveys were Administered in English and in Spanish
- Open to all age groups

SURVEY PARTICIPATION

Participation Method	Number of Participants	Percent of Total
Online	96	46%
Public facilities	17	8%
Immokalee event	63	30%
Golden Gate event	26	12%
Government Center (CAT Station) intercepts	6	3%
Naples Manor intercepts	1	0.5%
Total	209	100%

- Project timeframe was narrow.
- Information is helpful for understanding of issues of pedestrian and bicyclists who participated.
- 209 respondents is not statistically significant to represent the County as a whole.

SURVEY RESULTS

- **54% of all participants feel threatened for personal safety during walking or bicycling trips.**

- **45% of those who responded as feeling threatened while walking or bicycling indicated it was due to motorists.**

34% of respondents had been in a collision or forced from their path while bicycling or walking in the past 5 years.

SURVEY RESULTS

- Of 72 collisions/forced from path incidents:
  - 47% were experienced while bicycling
  - 40% were experienced while walking
  - Discrepancy of 13% is due to participants skipping the mode question.

- 70% indicated a motorist contributed to the incident.

- Of respondents who had collisions/forced from path incidents, 84% indicated the incident was not reported to police.

- **Approx. 5 out of 6 collision/forced from path incidents did <u>not</u> result in a police report.**

- Reasons for not reporting to police vary:
  - The incident happened quickly and motorist/license plate could not be identified.
  - Some prefer not to involve the police.
  - Some doubt the police could do anything about the incident.
  - Some were located on private property or involved a friend, family member or neighbor.

ClusterID	City	Street	From	To	Volume	Severity	Count	SevCrshPct
B	Immokalee	West Main Street	South 9th Street	S 1st Street	High	Severe	34	26.47
C	Naples	Airport Pulling Rd	Great Blue Dr	Estey Ave	High	Severe	20	30.00
F	Naples	Tamiami Trail N	Vanderbilt Beach Rd	97th Ave N	High	Severe	12	33.33
A	Naples	Tamiami Trail E	Commercial Drive	Seminole Ave	High	Moderate	53	16.98
D	Naples	Tamiami Trail N	98th Ave N	107th Ave N	High	Moderate	13	7.69
E	Naples	5th Ave South/Tamiami Trail	6th Ave S	Goodlette-Frank Rd S	High	Not Severe	12	0.00
G	Naples	Airport Pulling Rd	Cougar Dr	1400 ft South of Pine Ridge Rd	High	Not Severe	11	0.00
M	Naples	Outer Drive	Tamiami Trail E	Normandy Drive	Medium	Severe	6	33.33
R	Immokalee	Lake Trafford Rd	Krystal Lane	Marjorie St	Medium	Severe	6	66.67
GG	E Naples	Golden Gate Pkwy	42nd Terr SW	41st St SW	Medium	Severe	4	50.00
HH	E Naples	Collier Blvd	17th Ave SW	500 ft South of 18th Ave SW	Medium	Severe	4	75.00
MM	Immokalee	Jefferson Ave W	Glades St	Flagler St	Medium	Severe	4	75.00
J	E Naples	Golden Gate Pkwy	Sunshine Blvd	400 ft West of 45th St SW	Medium	Moderate	8	12.50
K	Naples	Tamiami Trail N	Cypress Woods Dr	Shady West Lane	Medium	Moderate	8	12.50
N	Naples	Airport Pulling Rd	Estey Ave	Poinsettia Ave	Medium	Moderate	6	16.67
P	Naples	Goodlette-Frank Rd N	5th Ave N	4th Ave N	Medium	Moderate	6	16.67
Q	Naples	Tamiami Trail N	28th Ave N	Ridge St	Medium	Moderate	6	16.67
T	Naples	Radio Rd	Sherbrook Dr	Cape Sable Dr	Medium	Moderate	5	20.00
V	Naples	Tamiami Trail N	14th Ave N	10th Ave N	Medium	Moderate	5	20.00
X	E Naples	Sunset Rd	Sunshine Blvd	46th Terr SW	Medium	Moderate	5	20.00
Y	Immokalee	N 15th Street	Immokalee Dr	8th Ave	Medium	Moderate	5	20.00
BB	Naples	Bayshore Dr	Lakeview Dr	Shoreview Dr	Medium	Moderate	4	25.00
CC	Naples	3rd St S	14th Ave S	11th Ave S	Medium	Moderate	4	25.00
FF	E Naples	Santa Barbara Blvd	Copper Leaf Ln	Coronado Pkwy	Medium	Moderate	4	25.00
II	Naples	Pine Ridge Rd	Shirley St	Forest Lakes Blvd	Medium	Moderate	4	25.00
KK	Naples	Immokalee Rd	Livingston Rd	Sandra Bay Dr	Medium	Moderate	4	25.00
LL	Immokalee	Charlotte St	Madison Ave W	N 1st Street	Medium	Moderate	4	25.00
NN	Immokalee	Eden Ave	Pear St	Carson Rd	Medium	Moderate	4	25.00
H	Naples	Tamiami Trail	108th Ave N	Immokalee Rd	Medium	Not Severe	9	0.00
I	Naples	Airport Pulling Rd	Poinsettia Ave	Westview Dr	Medium	Not Severe	8	0.00
L	Naples	Immokalee Rd	Aston Dr	Regent Cir	Medium	Not Severe	7	0.00
O	Naples	Tamiami Trail	Central Ave	4th Ave N	Medium	Not Severe	6	0.00
S	Immokalee	Lake Trafford Rd	Pine St	Orchid Ave	Medium	Not Severe	6	0.00
U	Naples	Radio Rd	Tina Lane	St Clair Shores Rd	Medium	Not Severe	5	0.00
W	E Naples	45th St SW	Golden Gate Pkwy	23rd Ave SW	Medium	Not Severe	5	0.00
Z	Naples	Tamiami Trail	Saint Andrews Blvd	400 ft North of Saint Andrews	Medium	Not Severe	4	0.00
AA	Naples	Tamiami Trail	Rattlesnake Hammock Rd	Thomasson Dr	Medium	Not Severe	4	0.00
DD	Naples	Airport Pulling Rd	Domestic Ave	Enterprise Ave	Medium	Not Severe	4	0.00
EE	Naples	Airport Pulling Rd	N Horseshoe Dr	Longboat Dr	Medium	Not Severe	4	0.00
JJ	Naples	Airport Pulling Rd	Vanderbilt Beach Rd	Vanderbilt Beach Rd	Medium	Not Severe	4	0.00
							327	

Volume = Number of crashes
High Volume = 10+ crashes in cluster

Medium Volume = 4-9 crashes in cluster

*Low Volume = 3 or less crashes in cluster

*323 low volume clusters not listed

Severity = Fatal + Incapacitating crashes
Severe = 26-100% severe

Moderately Severe = 1-25% severe

Not Severe = 0% severe