



OUR HEALTH SYSTEM AND E-BIKE AND BIKE INJURIES

**Key West City Commission Meeting
October 2, 2019**

PANEL:

John Norris MD – Chief of Staff, Lower Keys Med Center

Eddie Perez – Division Chief of EMS, Key West Fire Department

Matthew Partrick MD – Emergency Dept. Chief, Lower Keys Med Center

Christopher Bensen MD - Orthopedics, Lower Keys Med Center

FACTORS RELATED TO INJURY

- Autos, pedestrians and cyclist make mistakes
- Factors involved include velocity, mass, distractions, weather and landscape
- Protection factors helmets, lights and maintenance

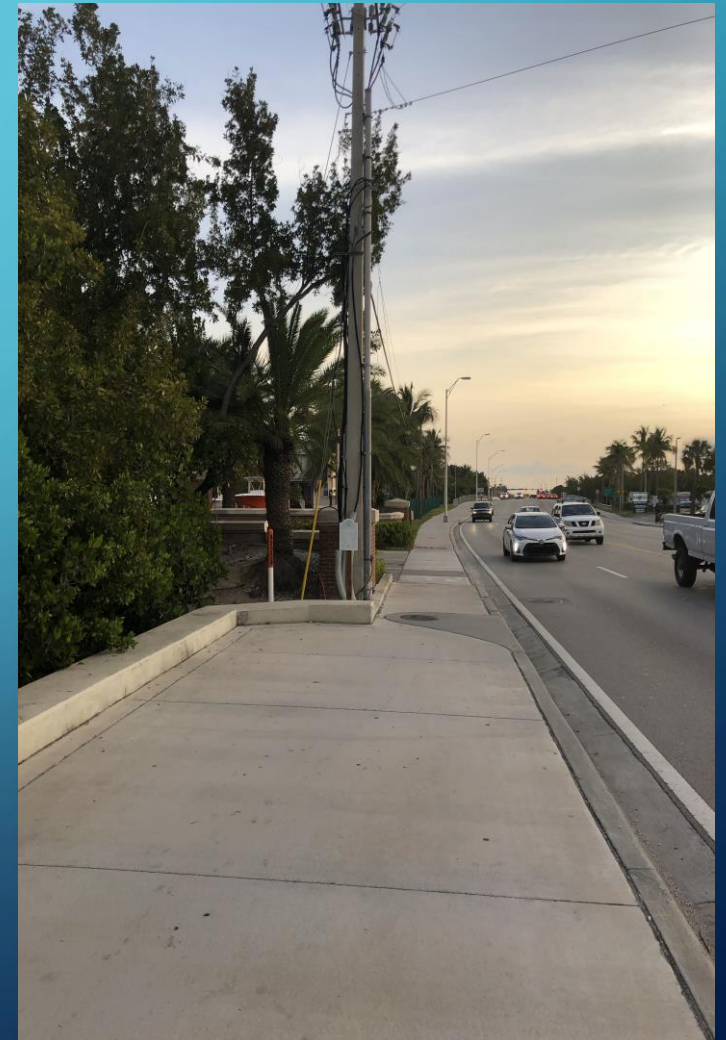
KEY PHYSICS FORMULA

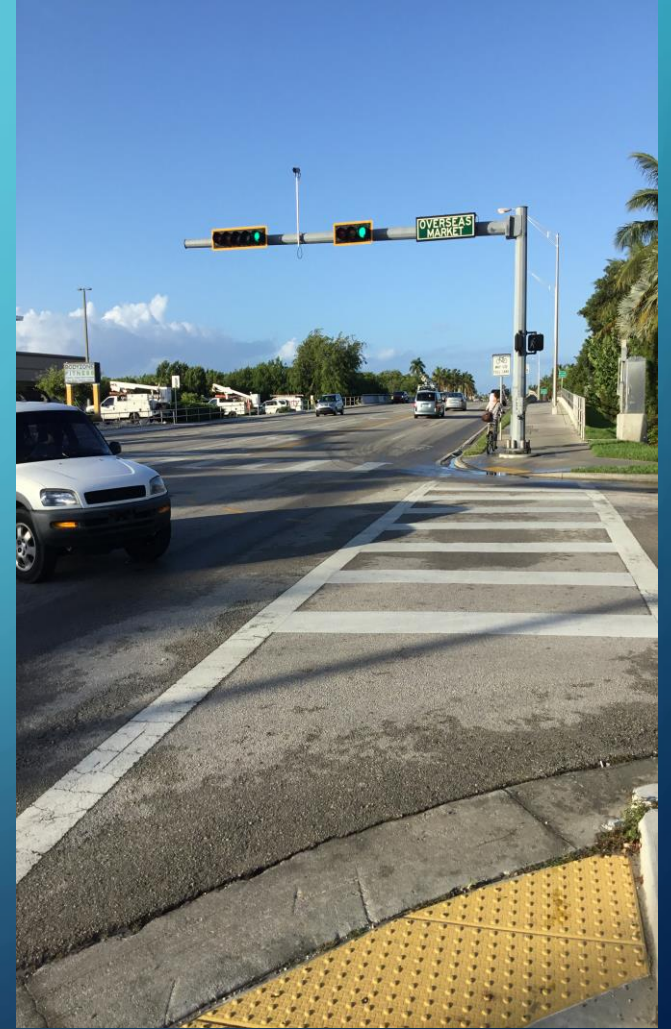
- Kinetic energy is a measure of impact energy

$$\text{Kinetic energy} = \text{mass} \times \text{velocity} \times \text{velocity} / 2$$

- Velocity is a major factor in potential for injury
- E-bike go up to 30 miles an hour ($1 \times 30 \times 30 / 2 = 450$)
- Bicycles challenged to reach 20 miles an hour ($1 \times 15 \times 15 / 2 = 112.5$)

LANDSCAPE





EVEN WITH GEAR, LIGHTS AND NO DISTRACTIONS

