



# INTERSECTION CRASH FACTS



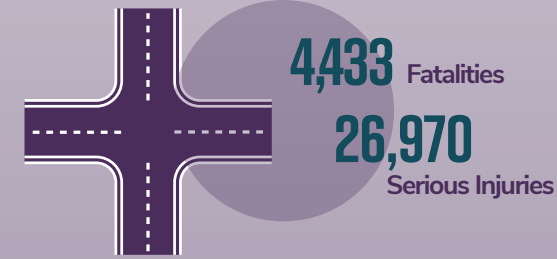
SIGNAL FOUR (S4) ANALYTICS | 2019-2023 FATAL AND SERIOUS INJURY CRASHES | ALL PUBLIC ROADWAYS

DRAFT JANUARY 2025

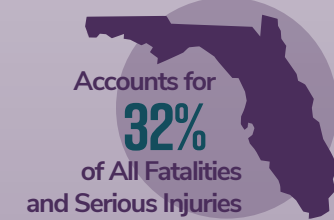
Intersection crashes are a top emphasis area of Florida's Strategic Highway Safety Plan. The Root Cause Analysis is a methodology to identify top contributing factors present in intersection crashes to help inform strategic investments and decisions to improve our effectiveness toward Florida's target of ZERO roadway fatalities and serious injuries.

## 2019-2023 Person Level Data

### Number of People



### Statewide



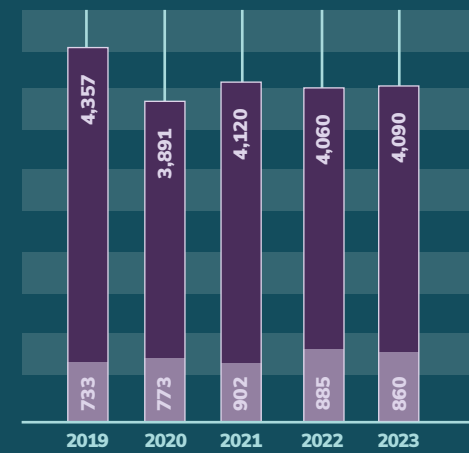
### Daily Average



## 2019-2023 Crash Level Data

### When Did Crashes Occur?

Fatal and Serious Injury Crashes by Year



Crashes Commonly Occur on **THU - SAT**



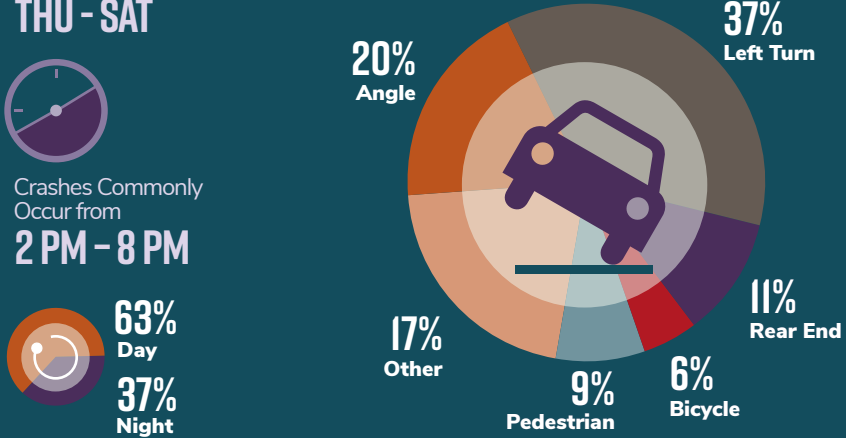
Crashes Commonly Occur from **2 PM - 8 PM**



**63%** Day  
**37%** Night

### Vehicle Maneuver

Intersection crashes are made up of following crash types

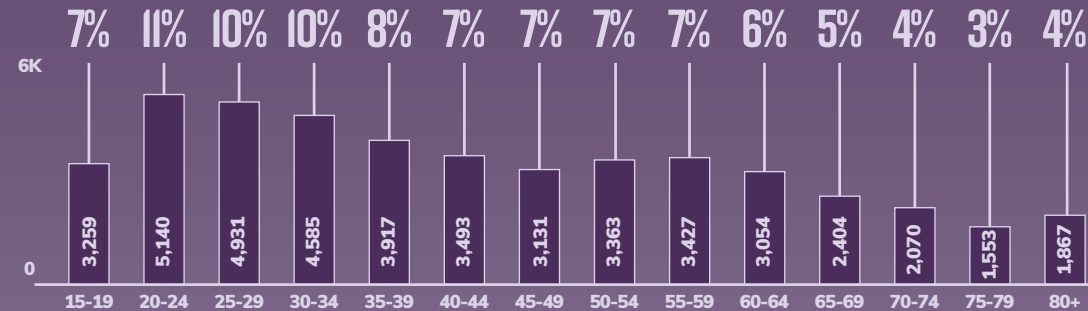


## All Drivers

**60%** Male  
**89%** FL Residents

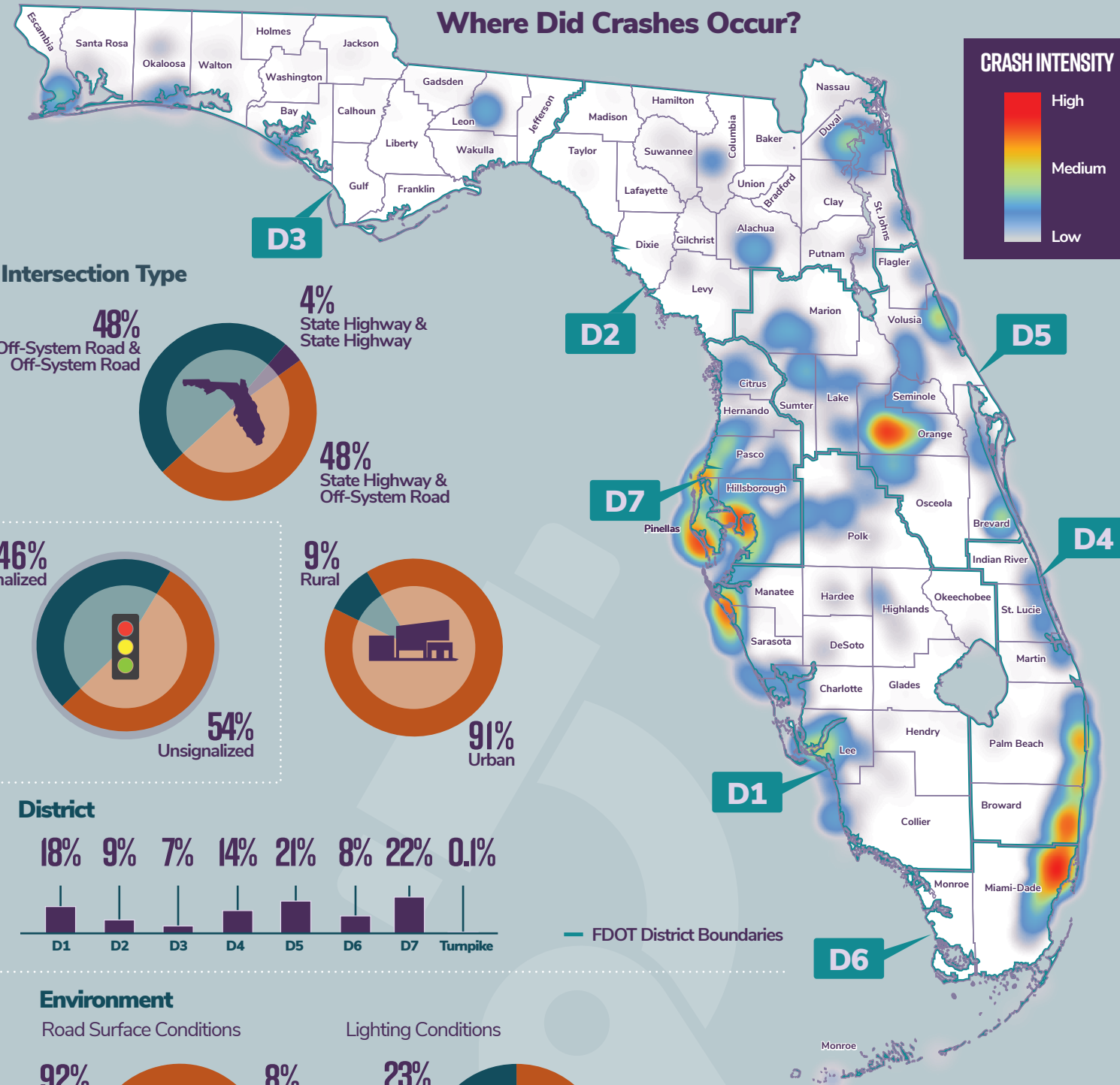


## Age of All Drivers

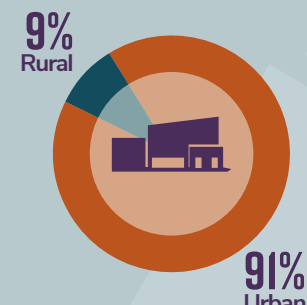
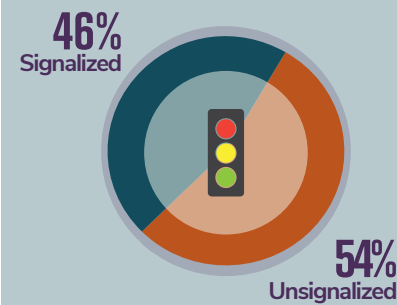
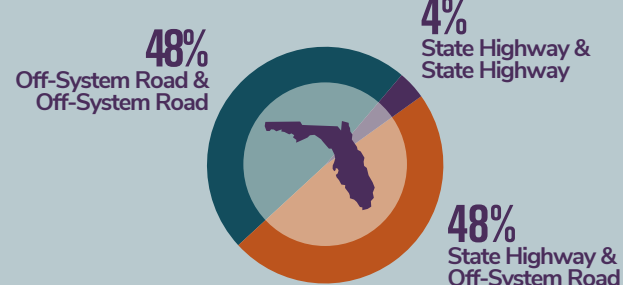


## 2019-2023 Crash Level Data

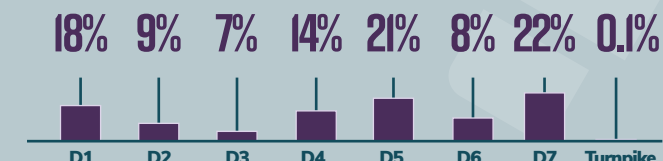
### Where Did Crashes Occur?



### Intersection Type

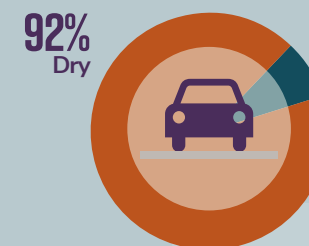


### District

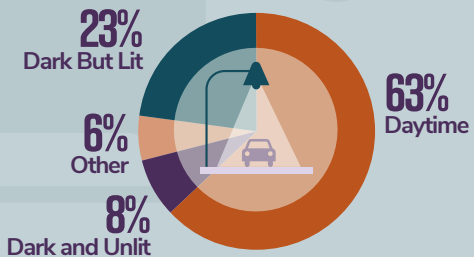


### Environment

Road Surface Conditions



Lighting Conditions





# INTERSECTION CRASH FACTS

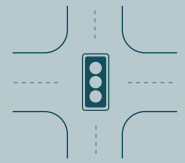


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## SIGNALIZED INTERSECTIONS

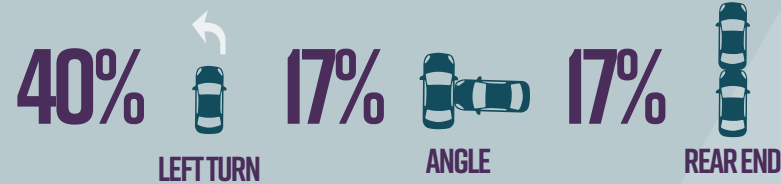
### 2019-2023 CRASH DATA



**46%** of intersection crashes occurred at **signalized** intersections, while **signalized** intersections account for **11%** of analysis intersections.

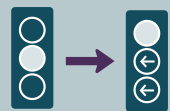
### FOCUSED INTERSECTION CRASH TYPES

Among crashes occurred at **signalized** intersections:



### PROVEN SAFETY COUNTERMEASURES

#### Convert Permissive/Protected Left Turn Phasing to Protected Only



Converting permissive/protected left turn signal phasing to protected only reduces potential for conflicts and left turn crashes by providing a separate space in time for left turning vehicles to complete their maneuver.

Focus Crash Types



#### Yellow Change Intervals



The length of time that the yellow signal indication is displayed can be changed based on safety needs. Insufficient time may not allow vehicles to safely exit the intersection, while too much time may lead to increased red light running as drivers come to expect an extended amount of time before the next movement begins. Further information on setting an appropriate yellow change interval time can be found in the FDOT [Traffic Engineering Manual section 3.6](#).

Focus Crash Types



#### Lighting



Roadway and pedestrian level lighting can improve visibility and increase time available to react to conflicts. Further information can be found in the FDOT Design Manual [chapter 231 Lighting](#).

Focus Crash Types



#### Pavement Friction Management



Improving pavement friction through countermeasures such as [High Friction Surface Treatment](#) (HFST) can reduce vehicle stopping distances and improve driver control of the vehicle. Further information on HFST can be found in the High Friction Surface Treatment Guidelines.

Focus Crash Types



### Appropriate Speeds for All Road Users



Setting and enforcing appropriate speed limits can reduce the number and severity of crashes at intersections. Further information on developing speed limits and developing a target speed for a roadway can be found in the FDOT [Context Classification Guide](#) and the FDOT Design Manual [chapter 202 Speed Management](#).

Focus Crash Types



### Safety Speed Cameras



Speed Cameras may be used in School Zones to enforce posted speeds. Further information on developing a Speed Detection System in a School Zone can be found FDOT's [School Zone Speed Detection System](#) page.

Focus Crash Types



### Reduced Left-Turn Conflict Intersections



Alternative intersection control strategies can be used to reduce or remove left-turn conflicts at an intersection. Further information can be found on FDOT's [Intersection Control Evaluation](#) page.

Focus Crash Types



### Roundabouts



Roundabouts are an intersection control strategy that reduces conflicts and lowers vehicle speeds, while maintaining access to all movements. Further information can be found on the [FDOT Roundabouts](#) page and in the FDOT Design Manual chapter 213 [Modern Roundabouts](#).

Focus Crash Types



### Backplates with Retro-Reflective Borders



Backplates with retro-reflective borders improve visibility of traffic signal heads.

Focus Crash Types

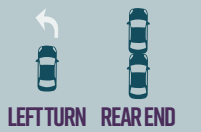


### Corridor Access Management



Corridor access management can reduce conflicts along a corridor by controlling the number of driveways and intersections and restricting movements. Further information can be found on the FDOT [Access Management](#) page and in the FDOT Design Manual chapter 201 [Design Controls](#).

Focus Crash Types

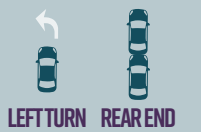


### Dedicated Left- and Right-Turn Lanes at Intersections



Turn lanes provide a designated space for vehicles to slow down and stage outside of the travel lane prior to a turning movement. Further information can be found in the FDOT Design Manual chapter 212 [Intersections](#).

Focus Crash Types





# INTERSECTION CRASH FACTS

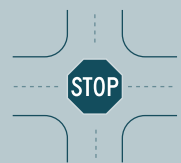


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## UNSIGNALIZED INTERSECTIONS

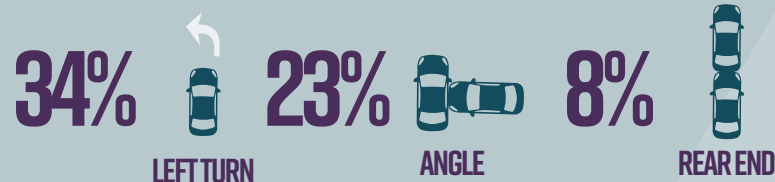
### 2019-2023 CRASH DATA



**54%** of intersection crashes occurred at **unsignalized** intersections, while **unsignalized** intersections account for **89%** of analysis intersections.

### FOCUSED INTERSECTION CRASH TYPES

Among crashes occurred at **unsignalized** intersections:



### PROVEN SAFETY COUNTERMEASURES

#### Conflict Warning System (ICWS)



ICWS uses sensors to warn drivers on the major and minor road approaches that cross traffic is present.

#### System Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections



There are a variety of low cost countermeasures such as signing and pavement markings to warn and alert travelers about safety issues. Further information can be found on the USDOT Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections page.

#### Lighting



Roadway and pedestrian level lighting can improve visibility and increase time available to react to conflicts. Further information can be found in the FDOT Design Manual [chapter 231 Lighting](#).

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### Roundabouts



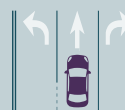
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### Focus Crash Types



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