Save a Life™
Texas Department of Transportation

Center for Transportation Safety

Safety Research and Outreach

Pedestrian and Bicycle Law Training

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Texas A&M Transportation Institute

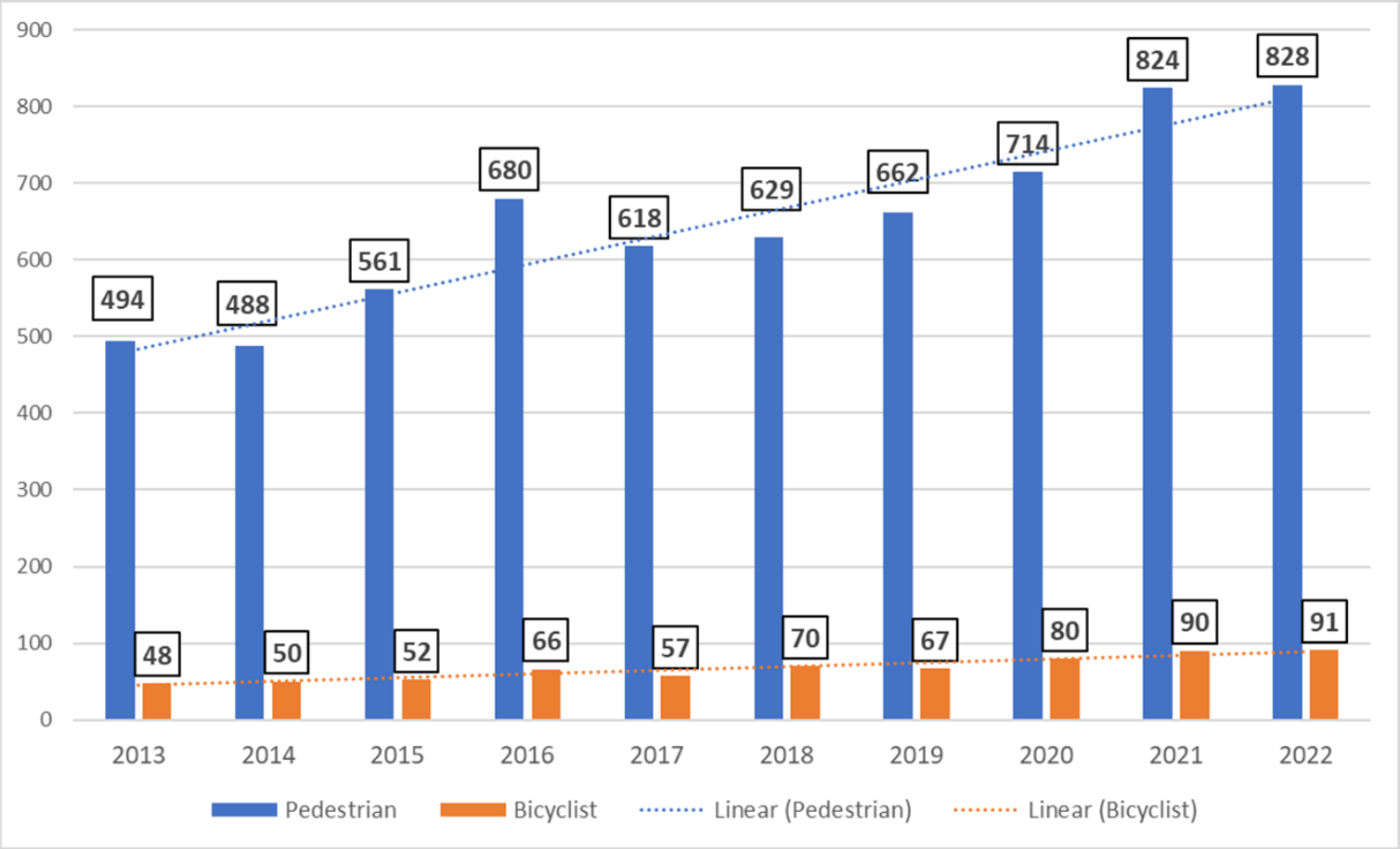
Introductions

1. Name and agency
2. How long have you been there/in law enforcement?
3. What are your expectations of this course?
   - Is there something specific you are looking to learn more about?

Course Logistics

- We encourage questions and discussion
- The course is split into 3 sections:
  - Section 1
    - Overview/Objectives/Laws
    - Definitions
    - Pedestrian & Bicyclist regulations
  - Section 2
    - Pedestrian & Bicyclist right-of-way
    - Common violations
  - Section 3
    - Crash Analysis Review
    - Crash Reporting
    - Prioritizing safety risk
- Pre and post tests
- Evaluations

Bicycle and Pedestrian Fatal Crashes in Texas



Course Overview

During this course, we will cover:

- Texas Transportation Code definitions of the rights and responsibilities for bicyclists and pedestrians
- A review of the importance of crash data
- Different bicyclist and pedestrian crash scenarios and how they should be reported
- Importance of enforcement

Course Objectives

- Motivation to increase enforcement for bicyclist and pedestrian safety
- Knowledge, skills, and abilities to conduct enforcement for bicyclist and pedestrian safety
- Knowledge, skills, and abilities to accurately complete crash reports for bicyclist and pedestrian related crashes

What the Laws tell us…and what they don't

- There are definite "gray" areas in the law.
- The training is based on our interpretation of the laws.
- The goal of the training is to equip you with as much knowledge of the laws and what they mean.
  - Officer discretion
- Do you already have some questions about gray areas in the laws?

Sidewalk Definition

The Texas Transportation Code (Sec.541.302(16)) defines a sidewalk as the portion of a street that is:

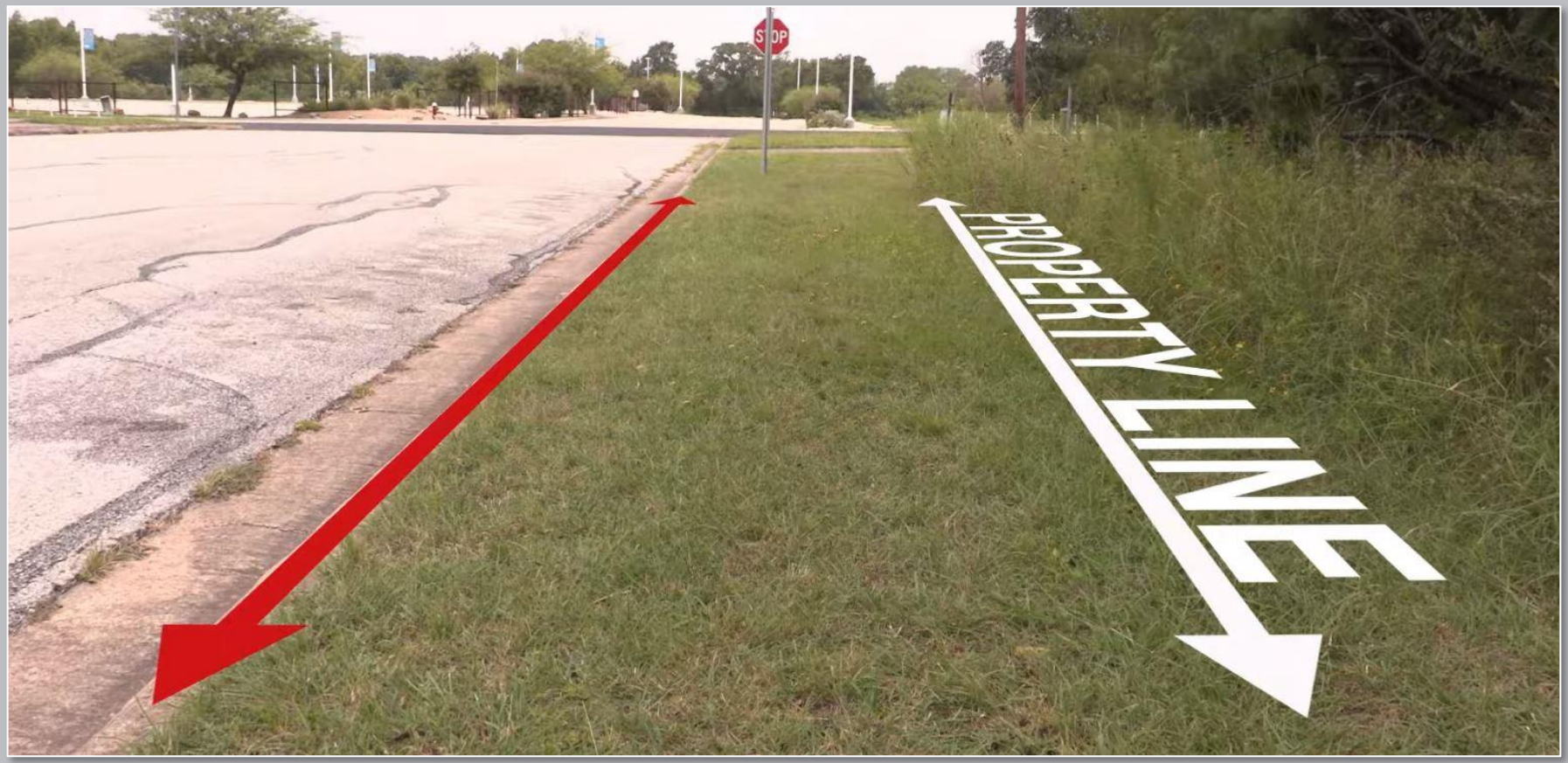
A. between a curb or lateral line of a roadway and the adjacent property line; and
B. intended for pedestrian use.

According to this definition a sidewalk is simply the area intended for pedestrians that is between the curb or lateral line of a road and the property line.

This means that sidewalks do not necessarily have to be paved to be considered a sidewalk.

However, it does need to be “accessible to the pedestrian” (Sec. 552.006)

Sidewalk Definition



Crosswalk Definition

According to the Texas Transportation Code (Sec. 541.302(2)) a crosswalk is defined as:

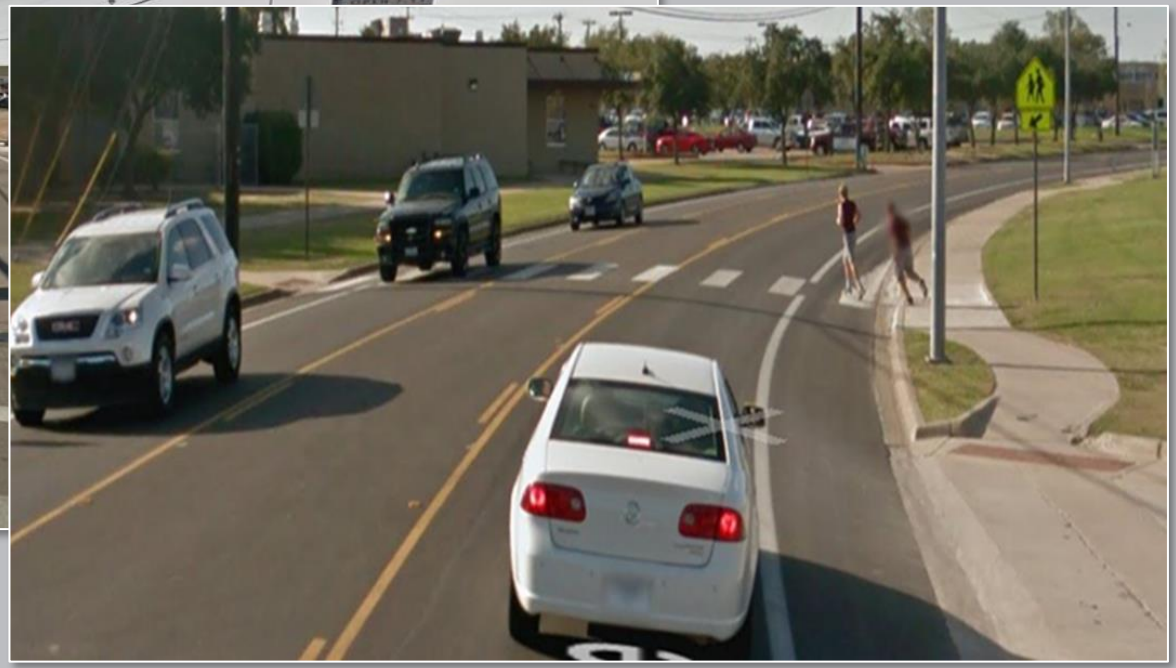
A. the portion of a roadway, including an intersection, designated as a pedestrian crossing by surface markings, including lines; or

B. the portion of a roadway at an intersection that is within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway.

Crosswalks

- **All** 4-way intersections have crosswalks on all four legs even if it is not marked with lines.

Marked Crosswalks



(Images from Google Maps)

Unmarked Crosswalks

(Image from Google Maps)

Crosswalk Video

What about 3-way Intersections?

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Crash Example #1

FACTORS & CONDITIONS

36 Contributing Factors (Investigator's Opinion)						37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
Unit #	Contributing			May Have Contrib.		Contributing			May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
2	59										2	1	97	2	1	1	11

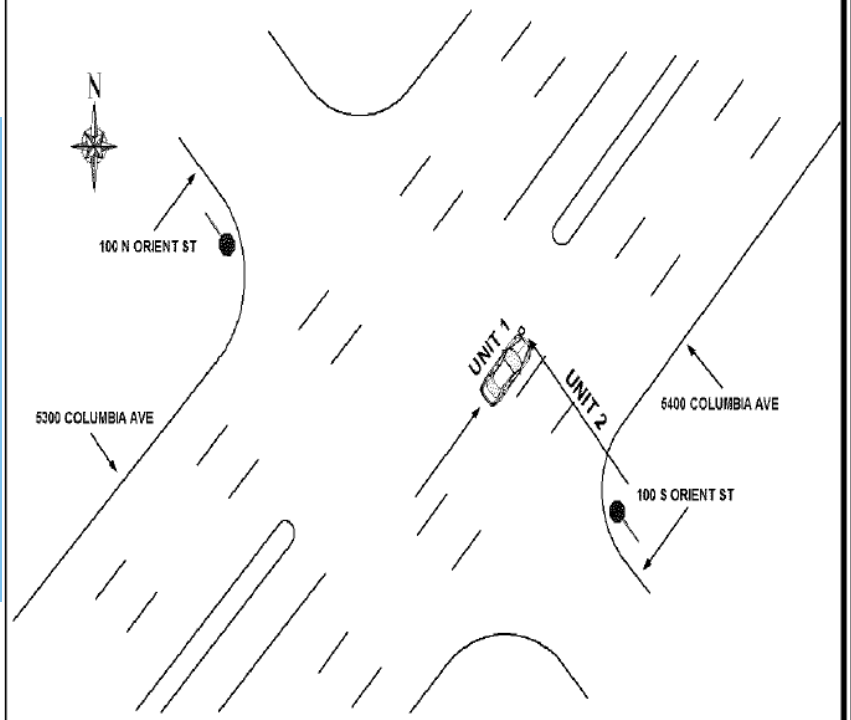
Investigator's Narrative Opinion of What Happened
(Attach Additional Sheets if Necessary)

RELATED CASE NUMBER IS 294080-2017. UNIT 1 WAS GOING NORTHEAST ON COLUMBIA AVE, AT S ORIENT ST, IN THE INSIDE TRAFFIC LANE. UNIT 2, A PEDESTRIAN, WAS WALKING NORTHWEST ACROSS COLUMBIA AVE. UNIT 2 WAS IN AN UNMARKED CROSSWALK AREA AT THE INTERSECTION.

- Unit 1 (vehicle) was in inside lane.
- Unit 2 (pedestrian) was in an unmarked crosswalk at an intersection.
- No traffic control for unit 1.
- Witness said no vehicles speeding or driving recklessly.
- Unit 2 died as a result of injuries.
- Pending toxicology report for unit 2.

RESULTS FOR UNIT 2. THIS IS TRAFFIC FATALITY #155 FOR THE DALLAS POLICE DEPARTMENT FOR 2017. DETECTIVE J STACEY #10023 RESPONDED TO THE SCENE FROM THE VEHICLE CRIMES UNIT. SGT O PRICE #7464 WAS THE TRAFFIC SUPERVISOR AT THE SCENE. NFI.

Field Diagram - Not to Scale



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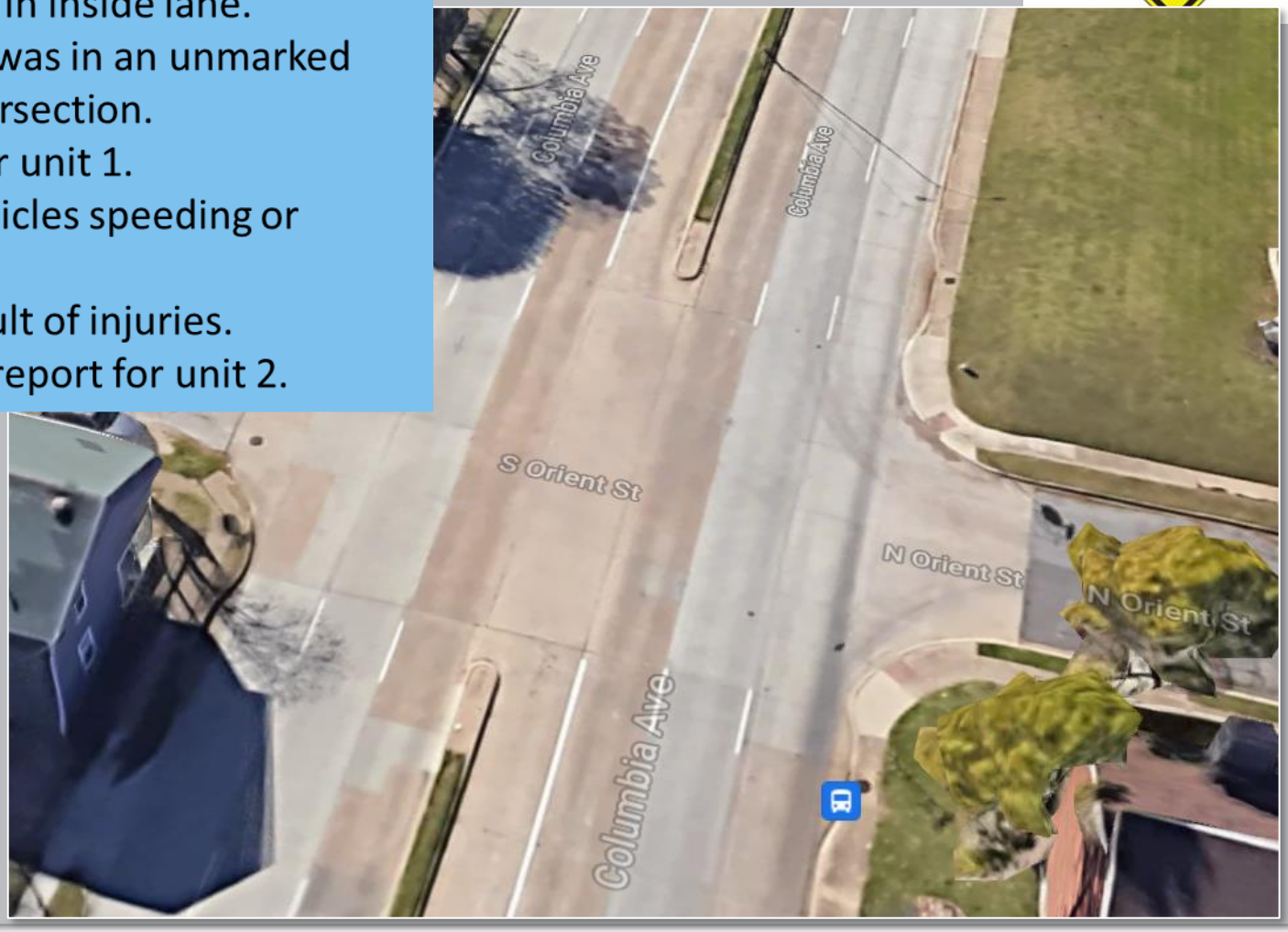
Crash Example #1

- Unit 1 (vehicle) was in inside lane.
- Unit 2 (pedestrian) was in an unmarked crosswalk at an intersection.
- No traffic control for unit 1.
- Witness said no vehicles speeding or driving recklessly.
- Unit 2 died as a result of injuries.
- Pending toxicology report for unit 2.



Pedestrian Regulations

- Use of sidewalks (TTC 552.006)
  - Pedestrians must use a sidewalk if one is *available and accessible* to them.
  - If there are no sidewalks, a pedestrian shall walk on the left side of the road or shoulder facing oncoming traffic, unless the left side of the roadway or the shoulder of the highway facing oncoming traffic is obstructed or unsafe.

Pedestrian Regulations

- A pedestrian may not suddenly leave a curb or other place of safety and proceed into a crosswalk in the path of a vehicle so close that it is impossible for the vehicle operator to stop and yield. (TTC 552.003b)

Pedestrian Regulations

- Driver to Exercise Due Care (552.008)
  - Due care to avoid collision
  - Give warning (sounding horn)
  - Proper precautions around children and confused or incapacitated persons

Crash Example #2

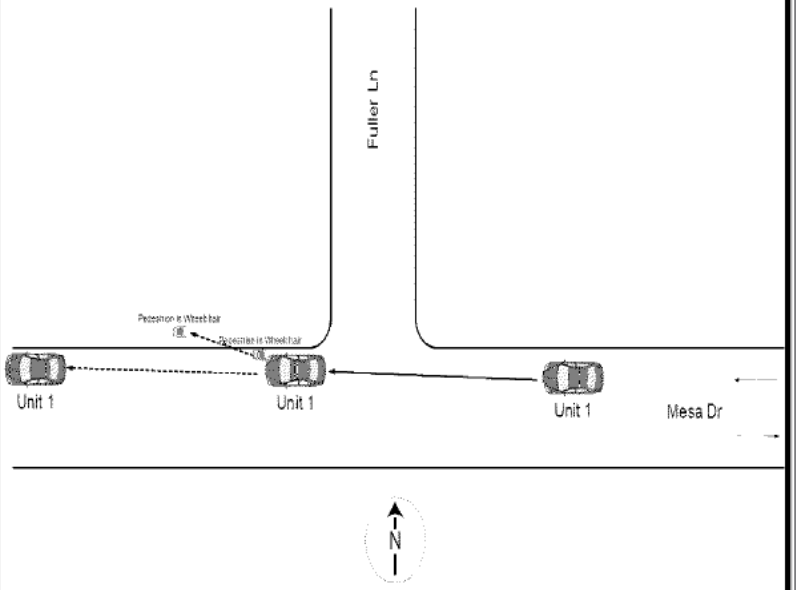
FACTORS & CONDITIONS

36 Contributing Factors (Investigator's Opinion)						37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
Unit #	Contributing			May Have Contrib.		Contributing			May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
2	59										1	2	2	1	1	1	96

Investigator's Narrative Opinion of What Happened
(Attach Additional Sheets if Necessary)

Unit 1 was traveling west on Mesa Dr. A pedestrian in a wheelchair was travelling west on Mesa Dr., facing west with his back to traffic. The pedestrian was not on the left side of the roadway or on the shoulder of the highway facing oncoming traffic as required by law. Unit 1 struck the pedestrian on its left rear side. The pedestrian and wheelchair were pushed into the barrow ditch of Mesa Dr., and came to rest with moderate damage to the wheelchair and incapacitating injuries to the pedestrian. Unit 1 came to rest facing west on Mesa Dr. with minimal right front quarter panel damage.

Field Diagram - Not to Scale



- Unit 1 traveling west.
- Unit 2 is a pedestrian in a wheelchair.
- Pedestrian was not on the left side of the roadway facing oncoming traffic.
- Pedestrian and wheelchair pushed into the ditch.

Crash Example #2

- Unit 1 traveling west.
- Unit 2 is a pedestrian in a wheelchair.
- Pedestrian was <u>not</u> on the left side of the roadway facing oncoming traffic.
- Pedestrian and wheelchair pushed into the ditch.

Bicycle & Micro-Mobility Regulations

- The Texas Transportation Code states that bicyclists have the same rights and duties as a motor vehicle driver. (TTC, 551.101)
- The same applies to motor-assisted scooters. (TTC, 551.352)
- Bicycle & motor- assisted scooter operators have the same rights and duties as drivers of vehicles. This includes…

Bicycle & Micro-Mobility Regulations

- Stop at stop signs and red lights

(TTC, 551.101)

Bicycle & Micro-Mobility Regulations

(TTC, 551.101, 545.104-107)

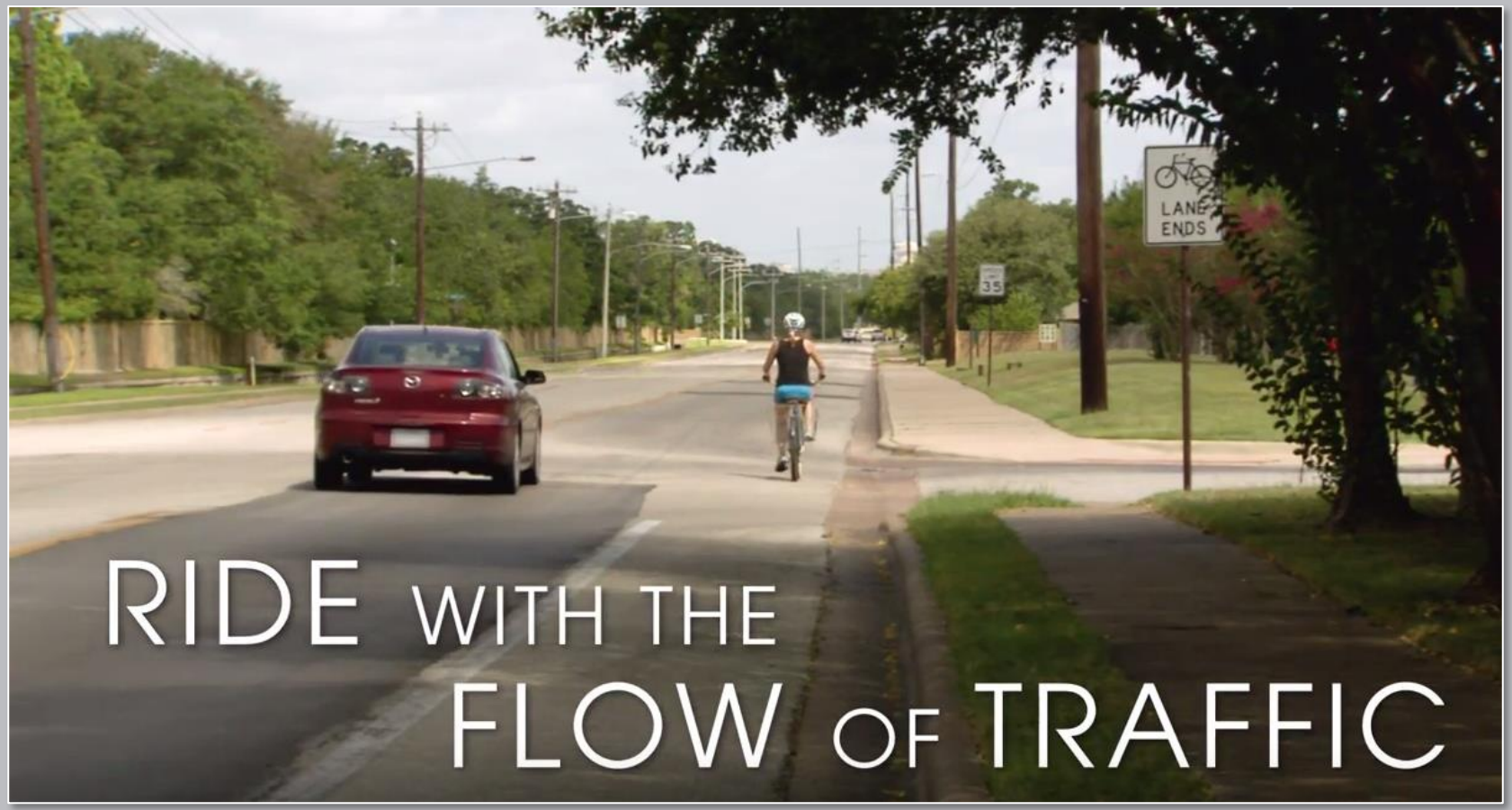
Bicycle & Micro-Mobility Regulations

- Bicyclists riding at night are required to have:

Front light must be visible from at least 500 feet away
Red light must be visible from 500 feet away
Red reflector must be visible from 50-300 feet away

(TTC, 551.104)

Bicycle & Micro-Mobility Regulations



(TTC, 551.101)

Bicycle & Micro-Mobility Regulations

- Ride as far to the right as practicable.

(TTC, 551.103)

Bicycle & Micro-Mobility Regulations

- Bicyclists are allowed to ride in the travel lane, even when a bike lane is present for a few reasons (TTC, 551.103):

Bicycle & Micro-Mobility Regulations

- To avoid obstructions and uneven surfaces

Bicycle & Micro-Mobility Regulations

- To make a left turn

Bicycle & Micro-Mobility Regulations

- If the travel lane is less than 14 feet wide or if it is too narrow for a bicycle and motor vehicle to safely travel side-by-side.

Bicycle & Micro-Mobility Regulations

- A bicyclist is also allowed to travel on the **left** side of the road on a one-way street.

(TTC, 551.103)

Crash Example #3

FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)						37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
	Unit #	Contributing			May Have Contrib.		Contributing			May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
	2	98										1	3	98	4	2	1	17

Investigator's Narrative Opinion of What Happened
(Attach Additional Sheets if Necessary)

Field Diagram - Not to Scale

- Unit 1 is motor vehicle.
- Unit 2 is bicycle.
- Lighting conditions were dark – lighted.
- Unit 2 had no lights.
- Unit 1 took the split of the road to the right.
- According to witness, unit 2 veered to the left.
- According to witness, unit 2 did not signal.
- Unit 2 hit side of unit 1.

Crash Example #3

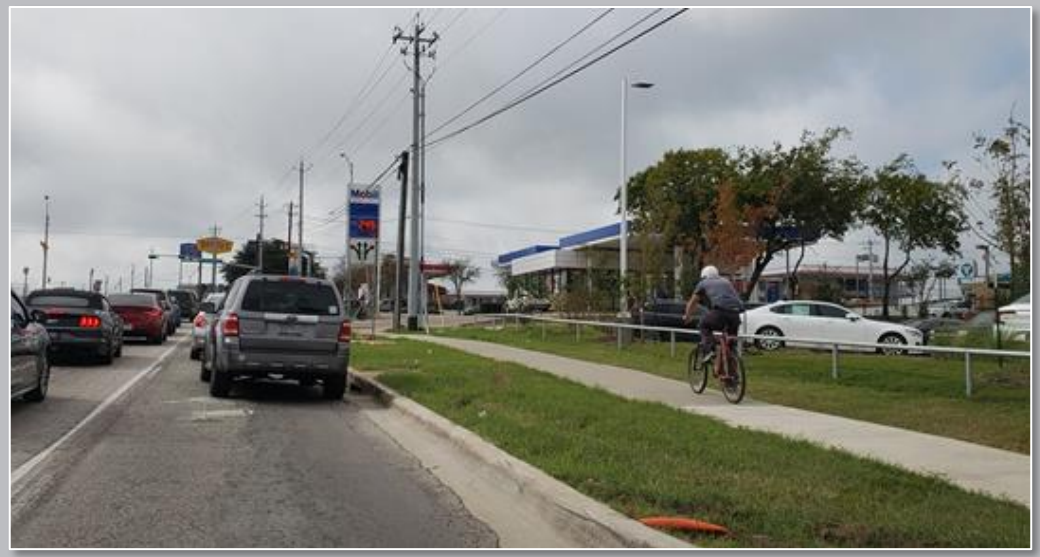
- Unit 1 is motor vehicle.
- Unit 2 is bicycle.
- Lighting conditions were dark – lighted.
- Unit 2 had no lights.
- Unit 1 took the split of the road to the right.
- According to witness, unit 2 veered to the left.
- According to witness, unit 2 did not signal.
- Unit 2 hit side of unit 1.

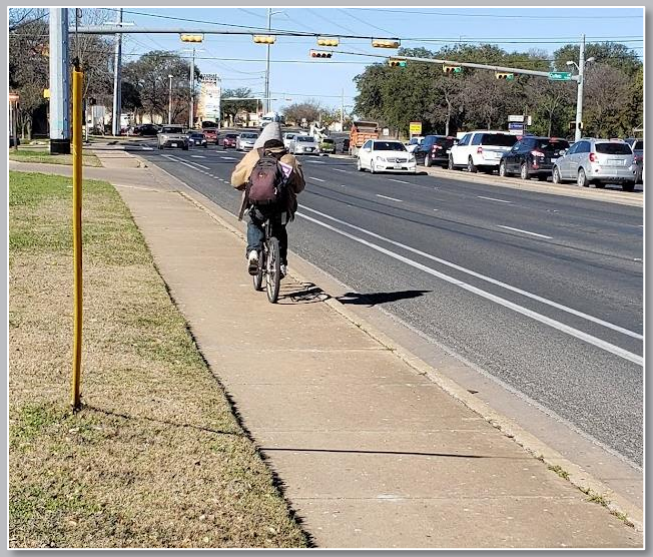
Bicycle & Micro-Mobility Regulations

- By Texas law, micro-mobility (or motor-assisted scooters) may operate on streets with speeds limit of up to 35 mph, but a local jurisdiction may prohibit use on certain roads/sidewalks. (TTC, 551.352)

Bicycle & Micro-Mobility Regulations

- Unless prohibited by city ordinance, a bicyclist has the right to ride on the sidewalk.
- TTC 545.428 clarifies that bicyclists using the sidewalk are treated more as a pedestrian when they reach a crosswalk.





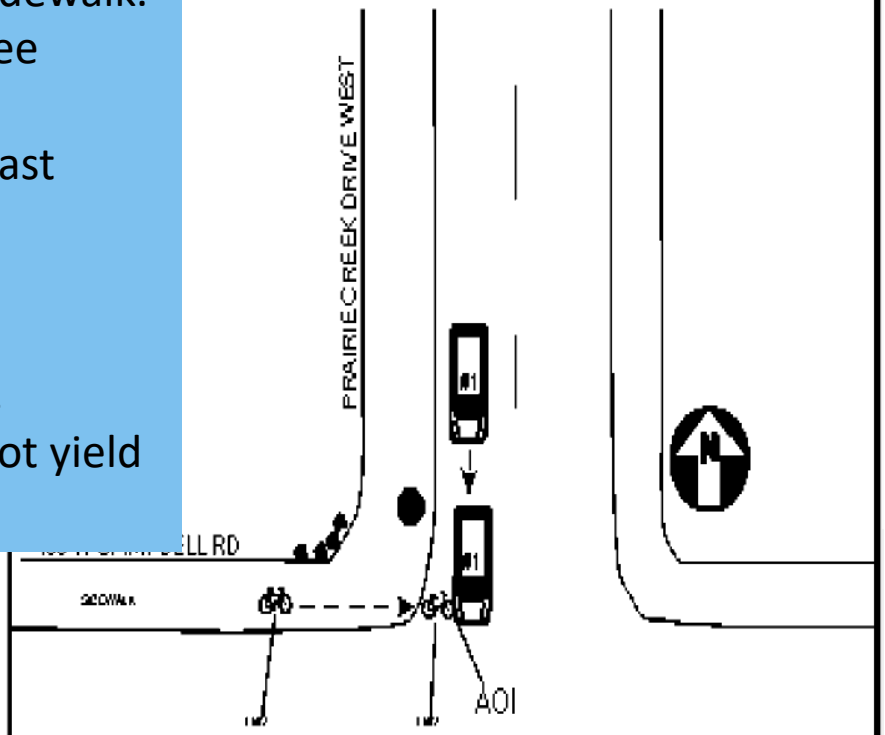
Crash Example #4

FACTORS & CONDITIONS	36 Contributing Factors (Investigator's Opinion)						37 Vehicle Defects (Investigator's Opinion)					
	Unit Num.	Contributing			May Have Contrib.		Contributing			May Have Contrib.		
	2	36										

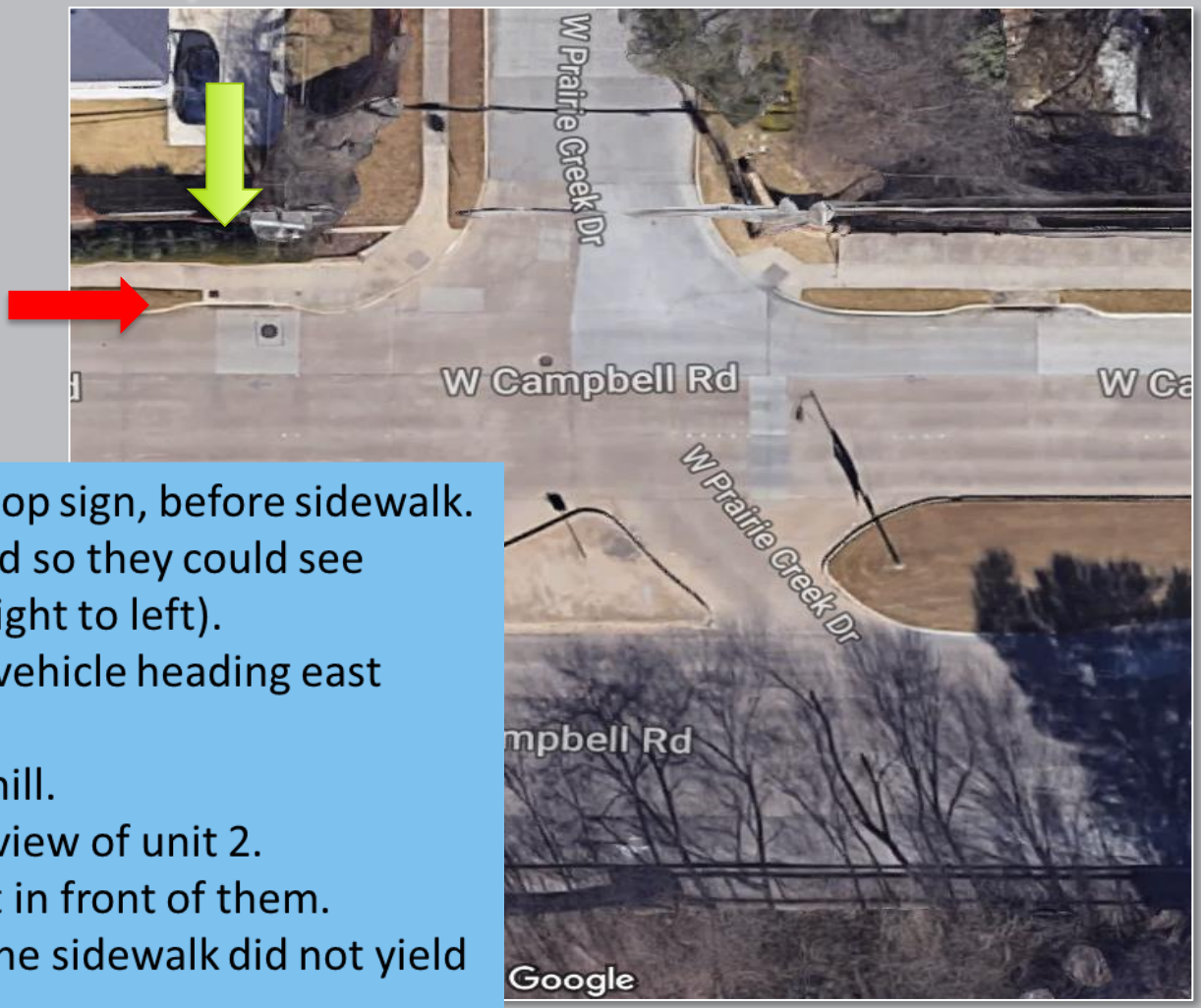
Environmental and Roadway Conditions						
38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
2	1	97	1	1	1	8

- Unit 1 (driver) stopped at stop sign, before sidewalk.
- Unit 1 slowly moved forward so they could see traffic heading west (from right to left).
- Unit 2 (bicyclist) struck the vehicle heading east (from left to right).
- Unit 2 was coming down a hill.
- Unit 1 said bushes blocked view of unit 2.
- Unit 2 said unit 1 pulled out in front of them.
- Officer said the bicycle on the sidewalk did not yield right-of-way to unit 1.

Field Diagram – Not to Scale



Crash Example #4



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- Unit 1 said bushes blocked view of unit 2.
- Unit 2 said unit 1 pulled out in front of them.
- Officer said the bicycle on the sidewalk did not yield right-of-way to unit 1.

Bicycle & Micro-Mobility Regulations

- The Texas Transportation Code requires a vehicle to pass a bicyclist "**at a safe distance**." However, it does not define what a safe distance is.

(TTC, 545.053, 551.101)

Bicycle Safe Passing Video

Additional Bicycle Regulations

- Working brakes (551.104)
- Only ride astride a permanent and regular seat attached to the bike. (551.102)
- May not carry more persons than designed to (551.102)

Additional Bicycle Regulations

- Carrying of large objects that prevent you from having at least one hand on the handlebars (551.102)
- May not attach to another vehicle (551.102)

Additional Bicycle Regulations

- May ride two abreast (551.103c)
  - In a single lane
  - May not impede normal and reasonable traffic flow
  - May not ride more than two unless on a part of the roadway set aside for bicycles.

Micro-mobility

Safety information from the provider:

- Obey traffic laws
  - State laws
  - Consult any local ordinances
- Where to ride
  - Not on the sidewalk
- Age restrictions
- Helmet use (not required by law)

(Pictures by: Neal Johnson)

END OF SECTION 1

What is one key takeaway from the first section of the course?

Right-of-Way Definition

- The right of one vehicle or pedestrian to **proceed** in a lawful manner **in preference to another vehicle or pedestrian** that is approaching from a direction, at a speed, and within a proximity that could cause a collision unless one grants precedence to the other. (TTC, 541.401)

Right-of-Way Definition

- To yield is to give way, letting others go first.
- Traffic control devices (signals, signs and markings) tell the road user how to behave and indicate who has the right of way.
- Where no traffic control devices exist, basic rules of the road apply
- Road users include motor vehicles, bicyclists, pedestrians, and others.
- Who yields to whom may be seen as simple, but in reality, it can be quite complicated.

Pedestrian Right-of-Way

- The operator of a vehicle shall **stop and yield** the right-of-way to a pedestrian crossing a roadway in a crosswalk if:
  1) no traffic control signal is in place or in operation; and
  2) the pedestrian is:
     a) on the half of the roadway in which the vehicle is traveling; or
     b) approaching so closely from the opposite half of the roadway as to be in danger.

Pedestrian Right-of-Way

- 544.010c – definition of where to stop

  Now reads: “An operator required to stop by this section shall stop at a clearly marked stop line. In the absence of a clearly marked stop line, the operator shall stop before entering the crosswalk on the near side of the intersection. In the absence of a clearly marked stop line or crosswalk, the operator shall stop at the place nearest the intersecting roadway where the operator has a view of approaching traffic on the intersecting roadway.”

Pedestrian Right-of-Way

- Right-of-way at signalized intersections is dictated by:
  - A separate pedestrian signal (if equipped).

(TTC, 552.002)

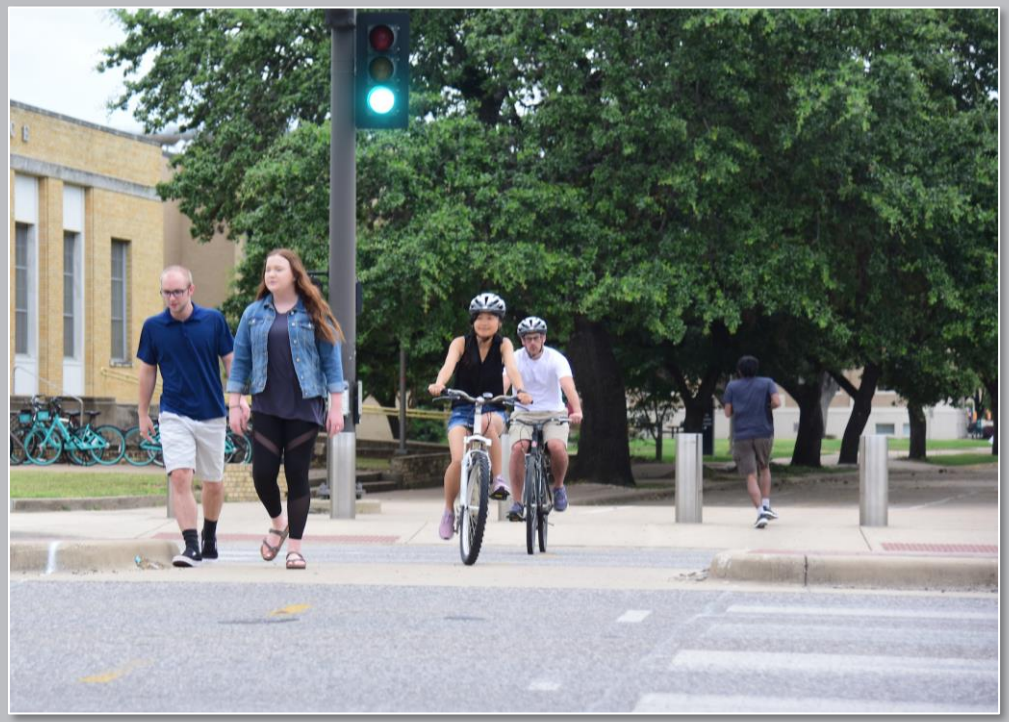
Pedestrian Right-of-Way

- Pedestrians are required to follow the pedestrian signals and cross only on the walk signal.
  - A pedestrian should not enter the crosswalk when it says DON'T WALK or WAIT or when the red hand is lit or flashing.

(TTC, 552.002)

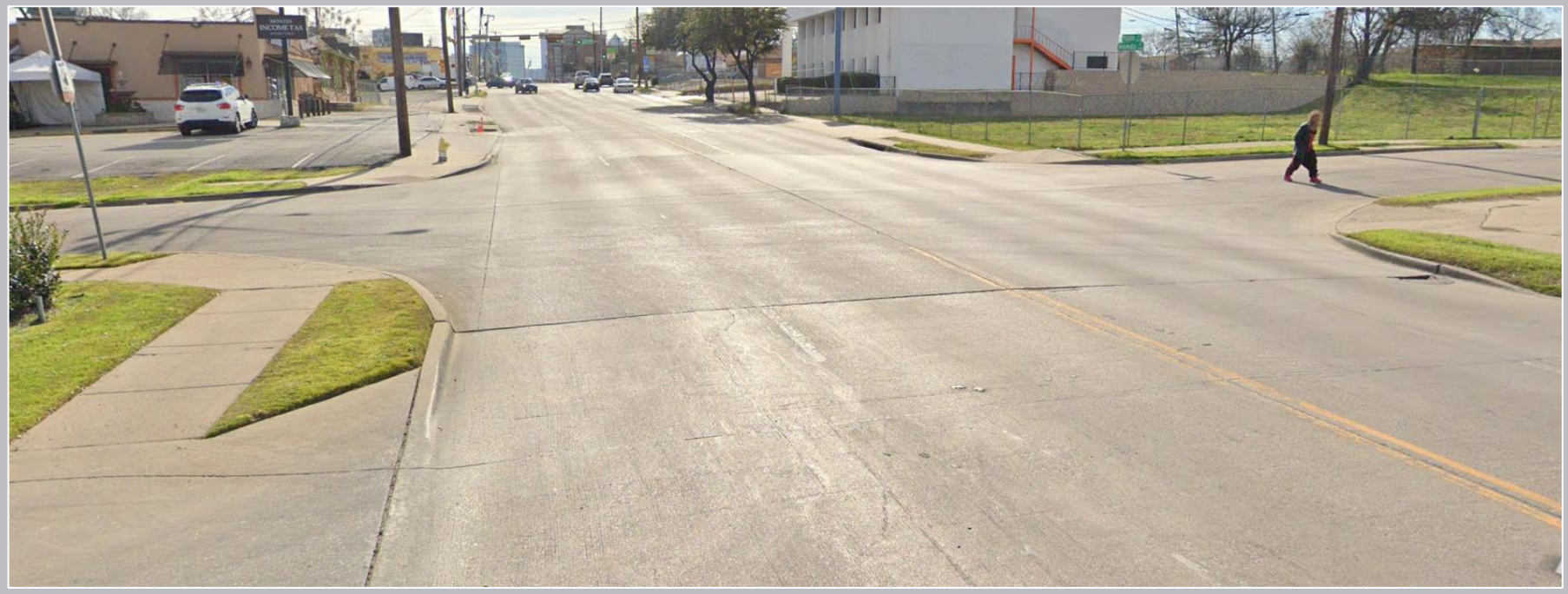
Pedestrian Right-of-Way

- If no pedestrian signals are installed or in operation, the pedestrian should cross a street when the signal light is green in their direction of travel.



Pedestrian Right-of-Way

- At all 4-way intersections not controlled by a traffic signal, pedestrians have the right-of-way, even at intersections with stop control only in one direction.



(TTC, 552.003)

Pedestrian Right-of-Way

- However, when crossing the road at a point other than a 4-way intersection or marked crosswalk a pedestrian must yield the right-of-way to all vehicles.

(TTC, 552.005)

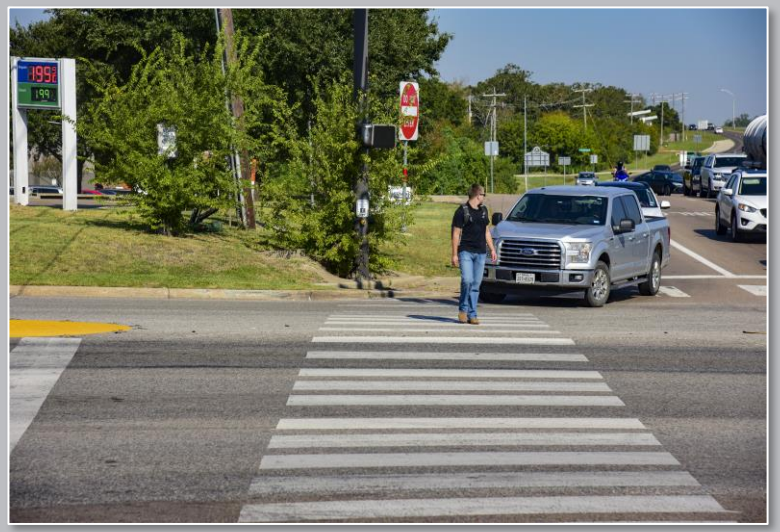
Pedestrian Right-of-Way

- It is illegal for a pedestrian to cross a road between two adjacent intersections at which traffic control signals are in use.

(TTC, 552.005)

Pedestrian Right-of-Way

- Motorists making turns while the signal light is green or when there is a flashing yellow arrow are required to stop and yield the right-of-way to pedestrians on their left and right.



(TTC, 552.002)

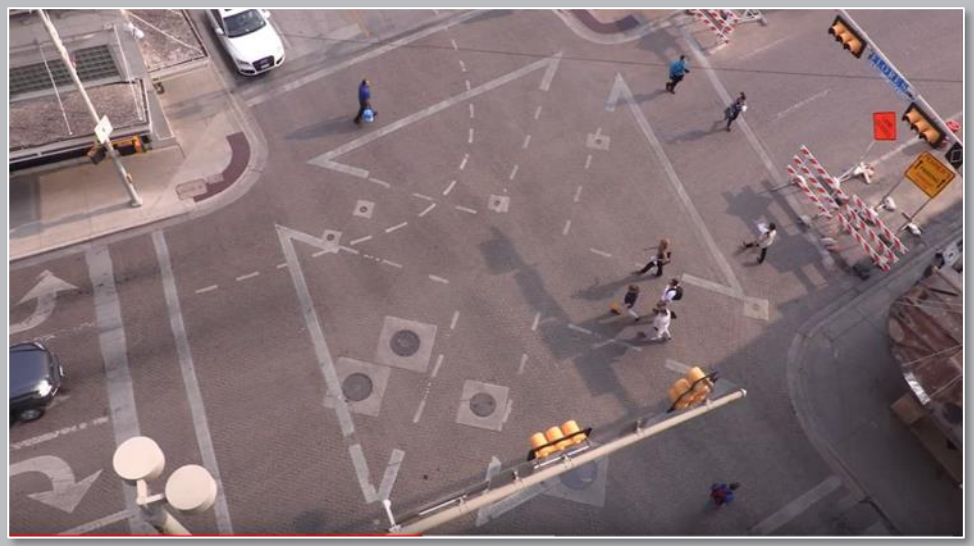
Pedestrian Right-of-Way

- Unless motorists are making a turn in accordance with a green lighted arrow.

(TTC, 552.001 & 002)

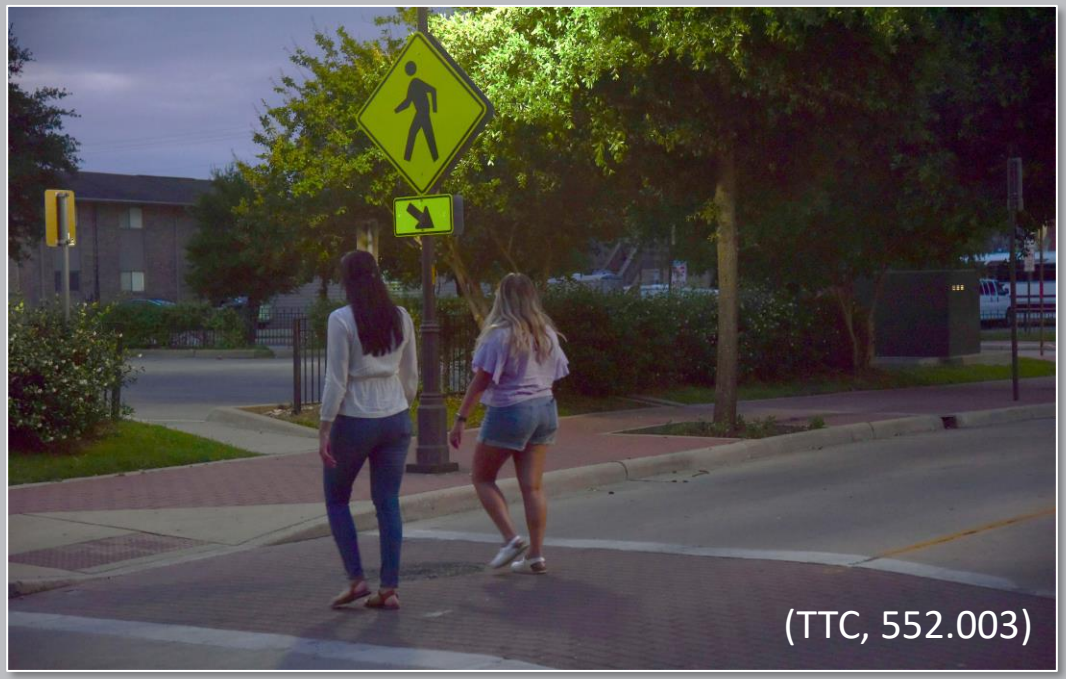
Pedestrian Right-of-Way

- If the intersection uses a pedestrian only phase, driver and pedestrian movements each receive a separate signal phase where pedestrians cross from all directions at the same time.



Pedestrian Right-of-Way

- Motorists are also required to stop and yield to pedestrians who are in a marked crosswalk that is **NOT** at an intersection.



Pedestrian Right-of-Way

- A motorist approaching another vehicle from behind may not pass that vehicle if they are stopped to allow a pedestrian to cross the roadway.

Pedestrian Right-of-Way (Video)

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Crash Example #5

Determining Right of Way

- Right turning vehicle (blue arrow) turned first in front of pedestrian during "WALK" signal
- Pedestrian (red arrow) began crossing after "DON'T WALK" signal had begun flashing
- Car turning left (yellow arrow) on green light, not green arrow

Contributing Factors

36. Factors and Conditions

1 = Animal on Road - Domestic
2 = Animal on Road - Wild
3 = Backed without Safety
4 = Changed Lane when Unsafe
14 = Disabled in Traffic Lane
15 = Disregard Stop and Go Signal
16 = Disregard Stop Sign or Light
17 = Disregard Turn Marks at Intersection
18 = Disregard Warning Sign at Construction
19 = Distraction in Vehicle
20 = Driver Inattention
21 = Drove Without Headlights
22 = Failed to Control Speed
23 = Failed to Drive in Single Lane
24 = Failed to Give Half of Roadway
25 = Failed to Heed Warning Sign
26 = Failed to Pass to Left Safely
27 = Failed to Pass to Right Safely
28 = Failed to Signal or Gave Wrong Signal
29 = Failed to Stop at Proper Place
30 = Failed to Stop for School Bus
31 = Failed to Stop for Train
32 = Failed to Yield ROW – Emergency Vehicle
33 = Failed to Yield ROW – Open Intersection
34 = Failed to Yield ROW – Private Drive
35 = Failed to Yield ROW – Stop Sign
36 = Failed to Yield ROW – To Pedestrian
37 = Failed to Yield ROW – Turning Left
38 = Failed to Yield ROW – Turn on Red
39 = Failed to Yield ROW – Yield Sign
40 = Fatigued or Asleep
41 = Faulty Evasive Action
42 = Fire in Vehicle
43 = Fleeing or Evading Police
44 = Followed Too Closely
45 = Had Been Drinking
46 = Handicapped Driver (Explain in Narrative)
47 = Ill (Explain in Narrative)
48 = Impaired Visibility (Explain in Narrative)
49 = Improper Start from Parked Position
50 = Load Not Secured
51 = Opened Door Into Traffic Lane
52 = Oversized Vehicle or Load
53 = Overtake and Pass Insufficient Clearance
54 = Parked and Failed to Set Brakes
55 = Parked in Traffic Lane
56 = Parked without Lights
57 = Passed in No Passing Lane
58 = Passed on Right Shoulder
59 = Pedestrian FTYROW to Vehicle
60 = Unsafe Speed
61 = Speeding – (Over Limit)
62 = Taking Medication (Explain in Narrative)
63 = Turned Improperly – Cut Corner on Left
64 = Turned Improperly – Wide Right
65 = Turned Improperly – Wrong Lane
66 = Turned when Unsafe
67 = Under Influence – Alcohol
68 = Under Influence – Drug
69 = Wrong Side – Approach or Intersection
70 = Wrong Side – Not Passing
71 = Wrong Way – One Way Road
72 = Cell/Mobile Phone Use
73 = Road Rage
98 = Other (Explain in Narrative)

AND CONDITIONS

Bicyclist Right-of-way

- A person operating a bicycle has the same rights and responsibilities as a driver operating a vehicle (TTC, 552.101).

As such,

- The bicyclist must yield to the vehicle that arrived before them at an all-way stop.
- The bicyclist must yield to the opposing through vehicles when turning left at an intersection.

Bicyclist Right-of-way

Bicyclist Right-of-way

A person may operate a bicycle in an outside lane that is:

- Less than 14 feet in width and does not have a designated bicycle lane adjacent to that lane; or
- Too narrow for a bicycle and a motor vehicle to safely travel side by side.

(TTC, 551.103)

Crash Example #6

Bicyclist Taking the Lane

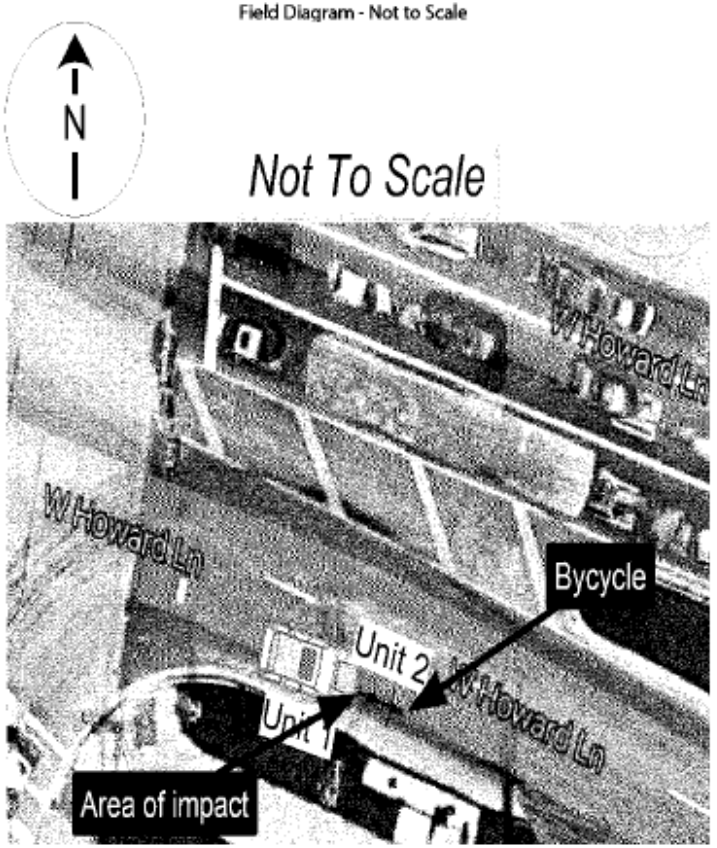
NARRATIVE AND DIAGRAM

Investigator's Narrative Opinion of What Happened
(Attach Additional Sheets if Necessary)

UNIT 1 & 2 WERE EAST BOUND IN THE 1200 BLK OF W HOWARD LN IN THE OUTSIDE LANE. UNIT 1 WAS TRAVELING BEHIND UNIT 2 IN LOW LIGHT. UNIT 1 DID NOT SEE UNIT 2 UNTIL IT WAS TOO LATE AND STRUCK UNIT 2'S REAR END CAUSING UNIT 2 RIDER TO FALL TO THE GROUND. UNIT 2 RIDER SUSTAINED MINOR INJURIES AND REFUSED TRANSPORT TO A HOSPITAL BY EMS. UNIT 2 WAS DAMAGED TO THE POINT WHERE IT HAD TO BE CARRIED FROM THE SCENE. UNIT 2 DISPLAYED SEVERAL ILLUMINATED FLASHING LIGHTS ON THE FRONT AND REAR OF THE BICYCLE AS WELL AS THE RIDER WAS WEARING A BRIGHT YELLOW COLORED SHIRT FOR VISIBILITY. UNIT 1 DRIVER STATED THAT HE SIMPLY DID NOT SEE UNIT 2.NOIWN4958

- Unit 1 & 2 were eastbound in the outside lane.
- Unit 1 was traveling behind Unit 2 in low light.
- Unit 1 struck Unit 2 from behind.
- Unit 2 had several illuminated flashing lights on the front and rear of the bicycle.
- The Unit 2 rider was wearing a bright colored shirt.
- Unit 1 driver stated that he did not see Unit 2.

Field Diagram - Not to Scale



Motorist /Bicyclist Right-of-way

(TTC, 545.101, 545.103, 541.401, 551.101)

Crash Example #7
Right Hook

FACTORS & CONDITIONS

36 Contributing Factors (Investigator's Opinion)						37 Vehicle Defects (Investigator's Opinion)					Environmental and Roadway Conditions						
Unit #	Contributing			May Have Contrib.		Contributing			May Have Contrib.		38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
1	98										2	1	2	1	1	1	16

NARRATIVE AND DIAGRAM

Investigator's Narrative Opinion of What Happened
(Attach Additional Sheets if Necessary)

UNIT 1 WAS TRAVELING NORTH IN THE RIGHT LANE OF THE 1100 BLOCK OF S LAMAR BLVD. UNIT 2, A BICYCLE, WAS TRAVELING NORTH IN THE BICYCLE LANE. ACCORDING TO AN INDEPEDENT WITNESS, UNIT 1 WAS WELL AHEAD OF THE BICYCLE AND ACTIVATED ITS RIGHT TURN SIGNAL TO MAKE A RIGHT ONTO W GIBSON ST. UNIT 1 BEGAN THE TURN, AND UNIT 2 RAN INTO THE RIGHT BACK QUARTER. THE BICYCLIST COMPLAINED OF NECK PAIN AND WAS TRANSPORTED TO SOUTH AUSTIN HOSPITAL.

Field Diagram - Not to Scale

Motorist /Bicyclist Right-of-way

- Motorists are also required to yield to an oncoming bicyclist when making a left turn.

(TTC 545.152, 551.101)

Crash Example #8

Motorist Turning Left

- Bicyclist going straight (toward camera)
- Motorist turning left on permissive (green ball) left
- Motorist failed to yield to thru bicyclist

Motorist /Bicyclist Right-of-way

Shared Use Paths

Right of Way Order

Shared Use Paths

- Crosswalk for pedestrians
- Motorist has a warning sign for bike crossing. No yield or stop sign
- Yield sign for bikes crossing

Crash Example #9 (continued)

St. Petersburg, Florida

Texas A&M Transportation Institute

Crash Example #9
Shared Use Path

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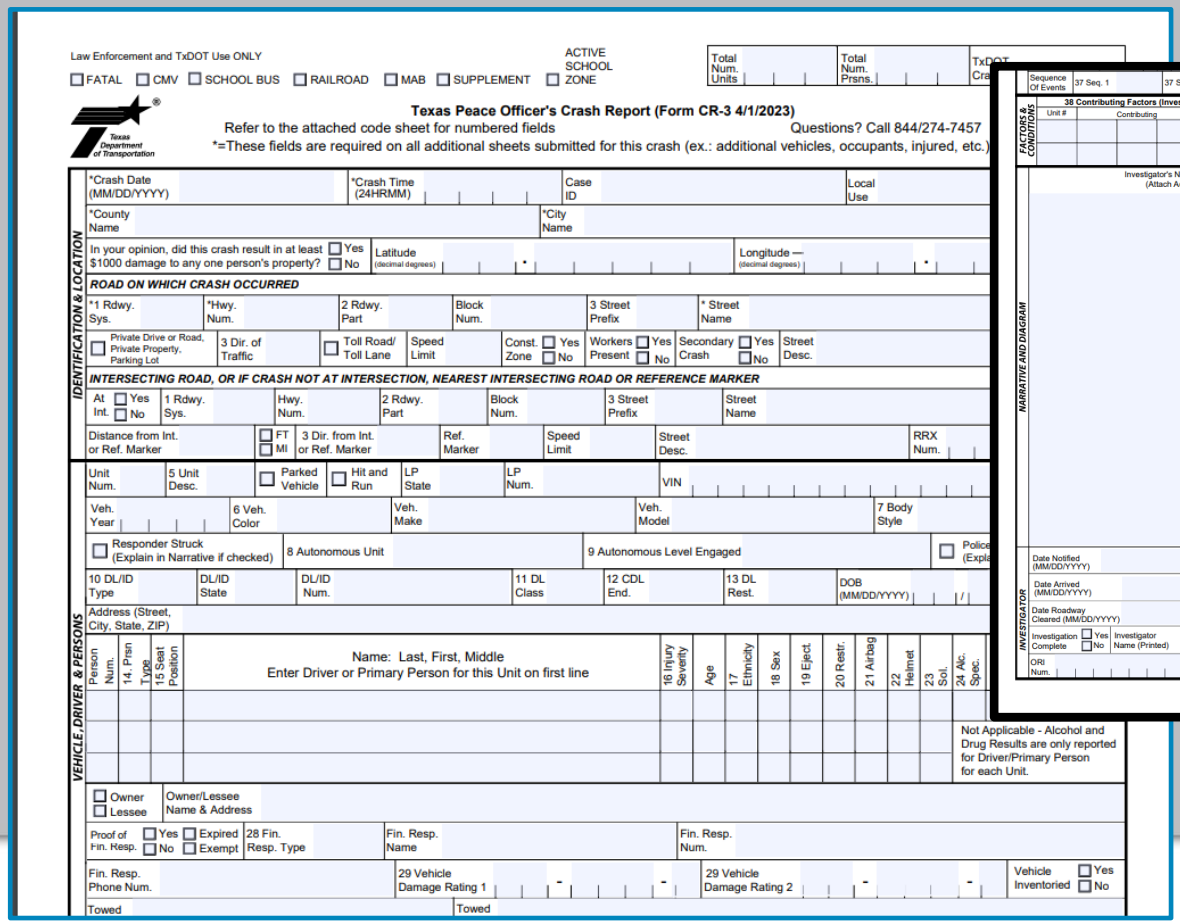
Crash Example #9 (continued)
Crash Report Exercise

Fillable form is on the TxDOT website:



Law Enforcement and TxDOT Use ONLY

☐ FATAL ☐ CMV ☐ SCHOOL BUS ☐ RAILROAD ☐ MAB ☐ SUPPLEMENT ☐ ACTIVE SCHOOL ZONE

Total Num. Units | Total Num. Prsns. | TxDOT Cra

Texas Department of Transportation

Texas Peace Officer's Crash Report (Form CR-3 4/1/2023)

Refer to the attached code sheet for numbered fields — Questions? Call 844/274-7457

*=These fields are required on all additional sheets submitted for this crash (ex.: additional vehicles, occupants, injured, etc.)

IDENTIFICATION & LOCATION

*Crash Date (MM/DD/YYYY) | *Crash Time (24HRMM) | Case ID | Local Use

*County Name | *City Name

In your opinion, did this crash result in at least $1000 damage to any one person's property? ☐ Yes ☐ No | Latitude (decimal degrees) | Longitude — (decimal degrees)

ROAD ON WHICH CRASH OCCURRED

*1 Rdwy. Sys. | *Hwy. Num. | 2 Rdwy. Part | Block Num. | 3 Street Prefix | * Street Name

☐ Private Drive or Road, Private Property, Parking Lot | 3 Dir. of Traffic | ☐ Toll Road/ Toll Lane | Speed Limit | Const. Zone ☐ Yes ☐ No | Workers Present ☐ Yes ☐ No | Secondary Crash ☐ Yes ☐ No | Street Desc.

INTERSECTING ROAD, OR IF CRASH NOT AT INTERSECTION, NEAREST INTERSECTING ROAD OR REFERENCE MARKER

At Int. ☐ Yes ☐ No | 1 Rdwy. Sys. | Hwy. Num. | 2 Rdwy. Part | Block Num. | 3 Street Prefix | Street Name

Distance from Int. or Ref. Marker | ☐ FT ☐ MI | 3 Dir. from Int. or Ref. Marker | Ref. Marker | Speed Limit | Street Desc. | RRX Num.

VEHICLE, DRIVER & PERSONS

Unit Num. | 5 Unit Desc. | ☐ Parked Vehicle | ☐ Hit and Run | LP State | LP Num. | VIN

Veh. Year | 6 Veh. Color | Veh. Make | Veh. Model | 7 Body Style

☐ Responder Struck (Explain in Narrative if checked) | 8 Autonomous Unit | 9 Autonomous Level Engaged | ☐ Police (Expl

10 DL/ID Type | DL/ID State | DL/ID Num. | 11 DL Class | 12 CDL End. | 13 DL Rest. | DOB (MM/DD/YYYY)

Address (Street, City, State, ZIP)

Person Num.	14. Prsn Type	15 Seat Position	Name: Last, First, Middle — Enter Driver or Primary Person for this Unit on first line	16 Injury Severity	Age	17 Ethnicity	18 Sex	19 Eject.	20 Restr.	21 Airbag	22 Helmet	23 Sol.	24 Alc. Spec.

Not Applicable - Alcohol and Drug Results are only reported for Driver/Primary Person for each Unit.

☐ Owner ☐ Lessee | Owner/Lessee Name & Address

Proof of Fin. Resp. ☐ Yes ☐ No ☐ Expired ☐ Exempt | 28 Fin. Resp. Type | Fin. Resp. Name | Fin. Resp. Num.

Fin. Resp. Phone Num. | 29 Vehicle Damage Rating 1 | 29 Vehicle Damage Rating 2 | Vehicle Inventoried ☐ Yes ☐ No

Towed | Towed

FACTORS & CONDITIONS

Sequence Of Events | 37 Seq. 1 | 37 Seq. 2 | 37 Seq. 3 | 37 Seq. 4 | Intermodal Shipping Container Permit ☐ Yes ☐ No | Actual Gross Weight | Total Num. Axles

38 Contributing Factors (Investigator's Opinion)			39 Vehicle Defects (Investigator's Opinion)		Environmental and Roadway Conditions						
Unit #	Contributing	May Have Contrib.	Contributing	May Have Contrib.	40 Weather Cond.	41 Light Cond.	42 Entering Roads	43 Roadway Type	44 Roadway Alignment	45 Surface Condition	46 Traffic Control

NARRATIVE AND DIAGRAM

Investigator's Narrative Opinion of What Happened (Attach Additional Sheets if Necessary) | Indicate North | Field Diagram - Not to Scale

INVESTIGATOR

Date Notified (MM/DD/YYYY) | Time Notified (24HRMM) | How Notified

Date Arrived (MM/DD/YYYY) | Time Arrived (24HRMM) | Report Date (MM/DD/YYYY)

Date Roadway Cleared (MM/DD/YYYY) | Time Roadway Cleared (24HRMM) | Date Scene Cleared (MM/DD/YYYY) | Time Scene Cleared (24HRMM)

Investigation Complete ☐ Yes ☐ No | Investigator Name (Printed) | ID Num.

ORI Num. | *Agency | Service/ Region/DA

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Common Violations

- This section is an overview of some of the other common laws that you may see during enforcement efforts.

Common Violations

- Texas has a statewide texting ban.

(TTC 545.4251)

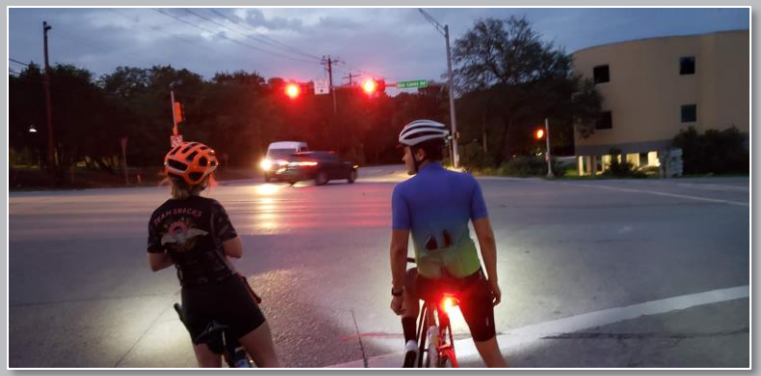
Common Violations

- Impairment

(Texas Penal Code, 49.04)

Common Violations

- Disregarding signal or stop sign – all vehicles



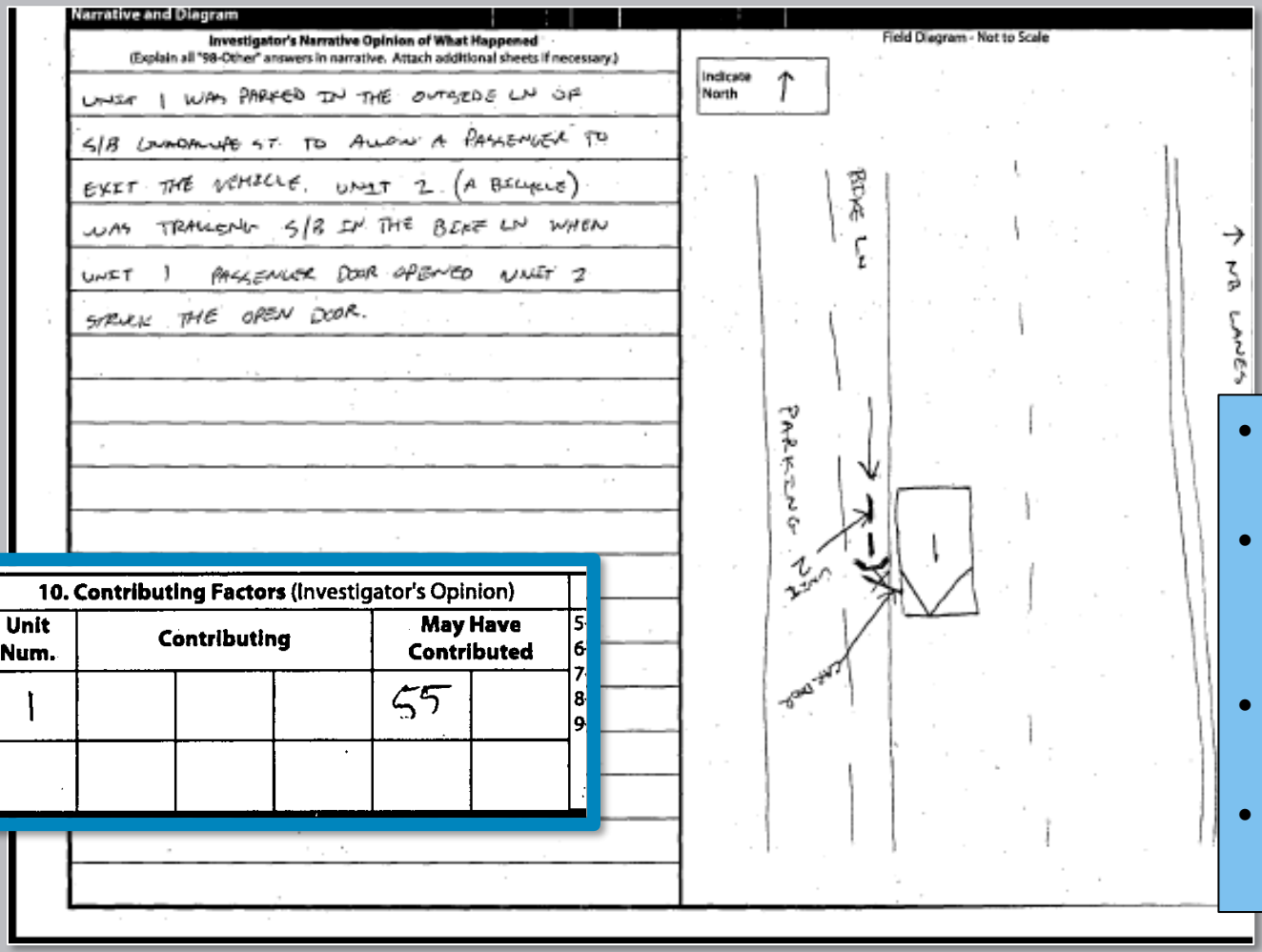
(TTC, 545.151, 551.101, 552.001-003)

Common Violations

- Door Zone Laws

(TTC, 545.418)

Crash Example #10



Narrative and Diagram

Investigator's Narrative Opinion of What Happened
(Explain all "98-Other" answers in narrative. Attach additional sheets if necessary.)

UNIT 1 WAS PARKED IN THE OUTSIDE LN OF S/B LAMAR AVE ST. TO ALLOW A PASSENGER TO EXIT THE VEHICLE. UNIT 2 (A BICYCLE) WAS TRAVELING S/B IN THE BIKE LN WHEN UNIT 1 PASSENGER DOOR OPENED UNIT 2 STRUCK THE OPEN DOOR.

Field Diagram - Not to Scale

Indicate North

BIKE LN

NB LANES

PARKING LN

1

2

10. Contributing Factors (Investigator's Opinion)

Unit Num.	Contributing			May Have Contributed	
1				55	

- Unit 1 was parked in outside lane.
- Unit 2 (bicycle) was traveling southbound in the bike lane.
- Unit 1 passenger door opened.
- Unit 2 (bicycle) struck the open door.

Bicyclists being Doored

Texas A&M Transportation Institute

END OF SECTION 2

What is one key takeaway from the second section of the course?

Top Pedestrian Crash Contributing Factors

Contributing Factors of Drivers

CF Category	n	%
FTYROW	3407	34.4%
Distraction (other than cell phone)	2867	29.0%
Person Failure	2450	24.7%
Other	1401	14.2%
Impaired	837	8.5%
Impaired Visibility	409	4.1%
Speed	421	4.3%
Disabled in Traffic Lane	238	2.4%
Person Disregard	294	3.0%
Turned Improperly	193	1.9%

Contributing Factors of Pedestrians

CF Category	n	%
FTYROW	8308	77.8%
Other	2074	19.4%
Impaired	1215	11.4%
Person Disregard	106	1.0%
Distraction (other than cell phone)	104	1.0%
Cell Phone Use	89	0.8%
Impaired Visibility	47	0.4%
Ill	45	0.4%
Person Failure	34	0.3%
Disabled in Traffic Lane	32	0.3%

- Could the “disabled in traffic lane” point to stranded motorists after a vehicle break-down, flat tire, or post-crash response?
- What has your experience been when using this contributing factor?

Top Bicycle Crash Contributing Factors

Contributing Factors of Drivers

CF Category	n	%
FTYROW	1567	39.9%
Distraction (other than cell phone)	1220	31.0%
Person Failure	873	22.2%
Other	349	8.9%
Impaired Visibility	171	4.4%
Turned Improperly	201	5.1%
Person Disregard	174	4.4%
Impaired	130	3.3%
Speed	75	1.9%
Risky Behavior	46	1.2%

Contributing Factors of Bicyclists

CF Category	n	%
FTYROW	1403	35.9%
Other	909	23.2%
Distraction (other than cell phone)	535	13.7%
Person Disregard	530	13.6%
Person Failure	506	12.9%
Wrong Way/Side or Approach	391	10.0%
Impaired	110	2.8%
Turned Improperly	107	2.7%
Impaired Visibility	53	1.4%
Speed	23	0.6%

Importance of Crash Reporting

- Contributing Factors
  - This section of the report is designed for the investigating officer to determine which factor(s) or condition(s) contributed to the crash for each unit.
- May Have Contributed Factors
  - This section is to record the fact that the condition was present, but the investigator is unable to determine whether the factor/condition contributed.

(TxDOT CR-100)

Contributing Factors Video

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Importance of Crash Reporting

- Contributing Factors referencing pedestrians should be used only for pedestrians, not bicyclists or micromobility users.
- 36 = FTYROW – To Pedestrian
- 59 = Pedestrian FTYROW to Vehicle

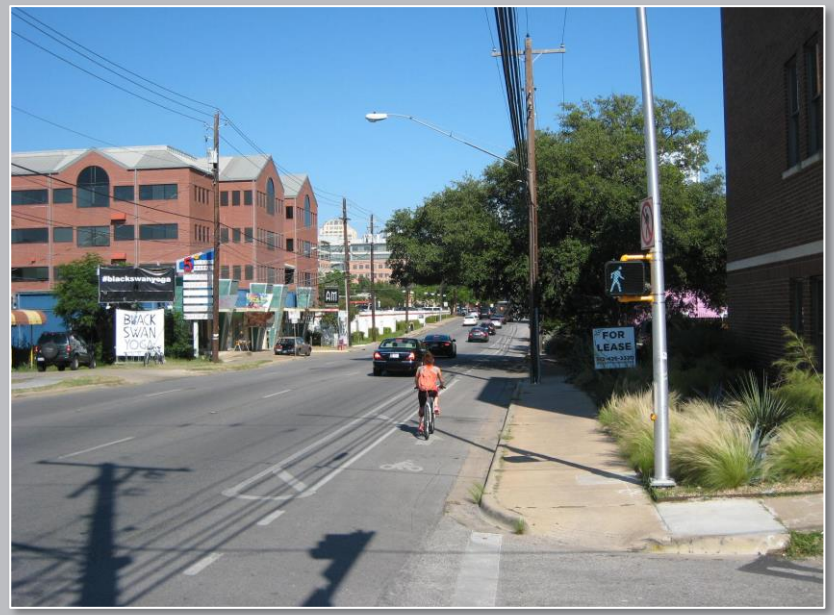
Importance of Crash Reporting

- Capture the code for the traffic control that is present at the location of the crash, even though it may have had no bearing on the causation of the crash. (TxDOT CR-100)

- If more than one traffic control is present, indicate the one most affecting this crash. (TxDOT CR-100)

CODE SHEET VALUES FOR TRAFFIC CONTROL	
2 = Inoperative (Explain in Narrative)	11 = Center Stripe/Divider
3 = Officer	12 = No Passing Zone
4 = Flagman	13 = RR Gate/Signal
5 = Signal Light	15 = Crosswalk
6 = Flashing Red Light	16 = Bike Lane
7 = Flashing Yellow Light	17 = Marked Lanes
8 = Stop Sign	18 = Signal Light With Red Light Running Camera
9 = Yield Sign	96 = None
10 = Warning Sign	98 = Other (Explain in Narrative)

Importance of Crash Reporting



Importance of Crash Reporting

- Motor Vehicle vs. Motorized Conveyance
  - Motor Vehicle
    - ATVs
    - Golf Cart
    - Moped
    - Recreational Off Highway/Utility Vehicle
    - Autocycle

Importance of Crash Reporting

Motor Vehicle

ATVs

Golf Carts

Mopeds

Off Highway/ Utility Vehicles

Electric Bicycles

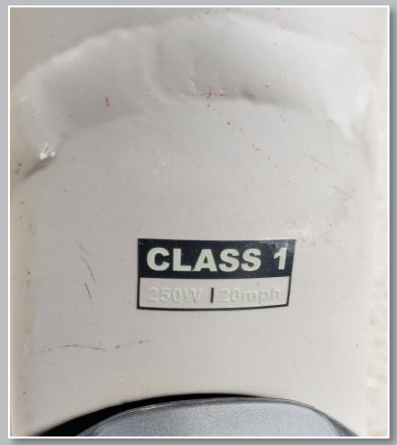
- "Electric bicycle" means a bicycle:
  - (A) equipped with:
    - (i) fully operable pedals; and
    - (ii) an electric motor of fewer than 750 watts; and
  - (B) with a top assisted speed of 28 miles per hour or less.
- Top assisted speed - the speed at which the bicycle's motor ceases propelling the bicycle or assisting the rider. (TTC 664.001)

Electric Bicycle Classes

- **Class 1**
  - Equipped with a motor that assists the rider only when the rider is pedaling; and
  - Top assisted speed of 20 miles per hour or less.
- **Class 2**
  - Equipped with a motor that may be used to propel the bicycle without the pedaling of the rider; and
  - Top assisted speed of 20 miles per hour or less.
- **Class 3**
  - Equipped with a motor that assists the rider only when the rider is pedaling; and
  - Top assisted speed of more than 20 but less than 28 miles per hour.
  - Must have a speedometer. (TTC 664.004)
  - Must be 15 or older to operate. (TTC 551.107)

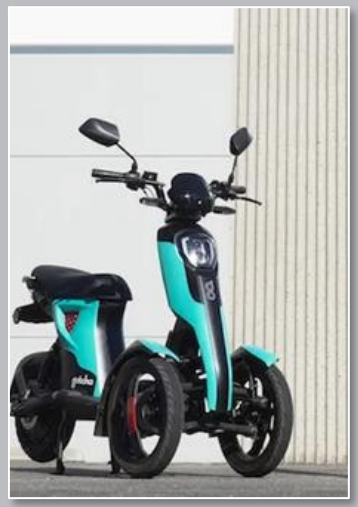
(TTC 664.001)

Electric Bicycles



Must be labeled with the class of the bicycle. (TTC 664.002)

Other Shared Mobility/Motor Vehicle Examples



Importance of Crash Reporting

- Motor Vehicle vs. Motorized Conveyance
  - Motorized Conveyance
    - Pocket Bikes
    - Go-carts
    - Riding Lawn Mowers
    - Segways
    - Motor Assisted Scooter (does not include moped, motorcycle or motor driven cycle)

Importance of Crash Reporting

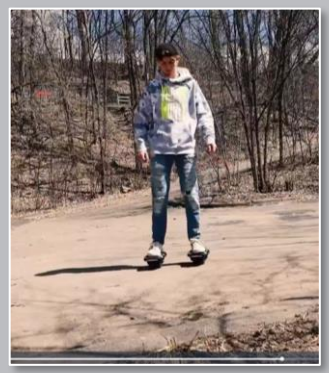
Motorized Conveyance

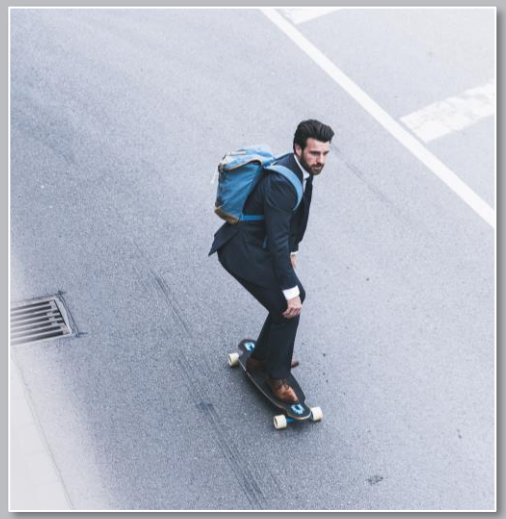
Riding Lawn Mower

Segway

Motorized Mobility Device

Other Motorized Conveyance Examples





Importance of Crash Reporting

Data Driven Decision Making

- Engineering
- Education
  - Outreach
  - Training
- Enforcement
- Emergency Medical Services (EMS)

Importance of Crash Reporting

Engineering Decisions

- Traffic engineering departments rely on the crash data for decisions related to:
  - Traffic signal, pedestrian hybrid beacon, or all-way stop installation
  - Signal phasing changes like removing the permissive phase of a left turn movement
  - Safety countermeasures – high crash intersections/corridors

Importance of Crash Reporting

- Document the details with whatever tools/technology you have available
  - Body camera
  - Dashboard camera
  - Audio recording
  - Writing equipment
- Interview witnesses as soon as possible
- Treat every crash/citation as if it will be heard in court. You may have to testify.

Prioritizing Safety Risk

- Targeting the riskier behaviors such as:
  - Pedestrians not yielding when crossing outside of an intersection or crosswalk
  - Drivers not yielding when required
  - Bicyclist riding against traffic in road
  - Bicyclist not using light at night
- Using enforcement resources to have the greatest safety benefit

Additional Stakeholders/Resources

- Engineering
  - TxDOT
  - Local Transportation Departments
- Enforcement
  - Other LEAs (such as ISD and University PD's)
  - Data (DPS, TxDOT, TTI)
- Education
  - Bicycle and Pedestrian Safety Outreach Groups
  - TxDOT
  - TTI
  - School Districts
- What additional resources does law enforcement need?

END OF SECTION 3

What is one key takeaway from the third section of the course?

Post – Test Questions

Resources/Contact Information

- **Neal Johnson –** neal-johnson@tti.tamu.edu
- https://www.walkbikesafetexas.org/law-enforcement-resources/