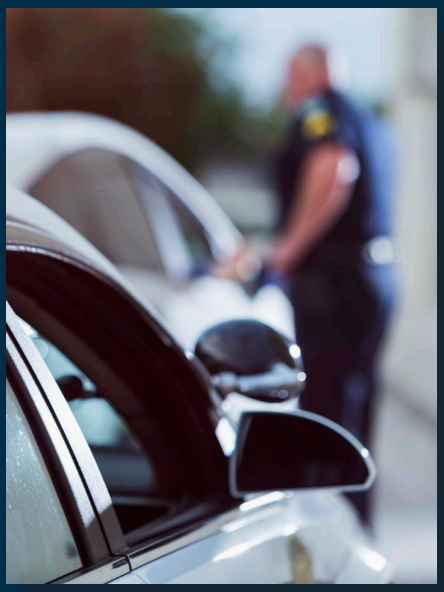
Houston-Galveston Area Council

# STATE OF SAFETY

## 2020 Annual Report

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The Houston-Galveston Area Council Metropolitan Planning Organization
State of Safety
2020 Annual Report

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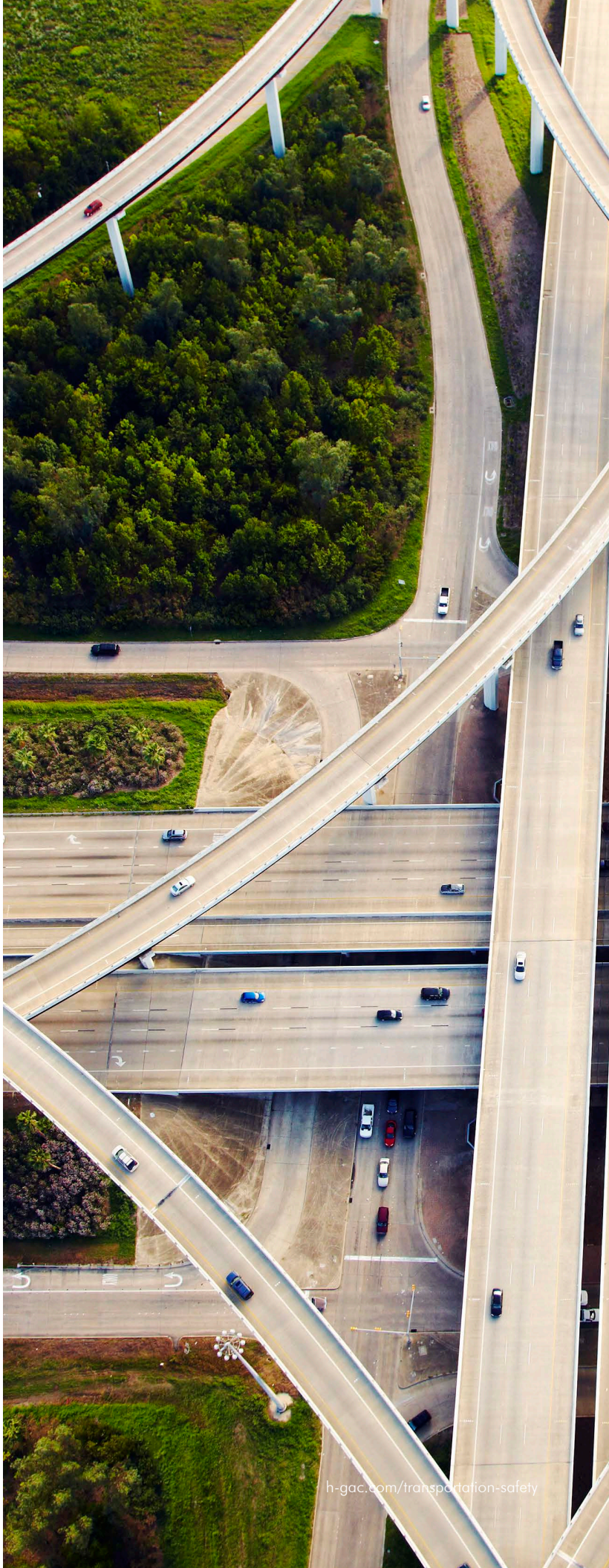
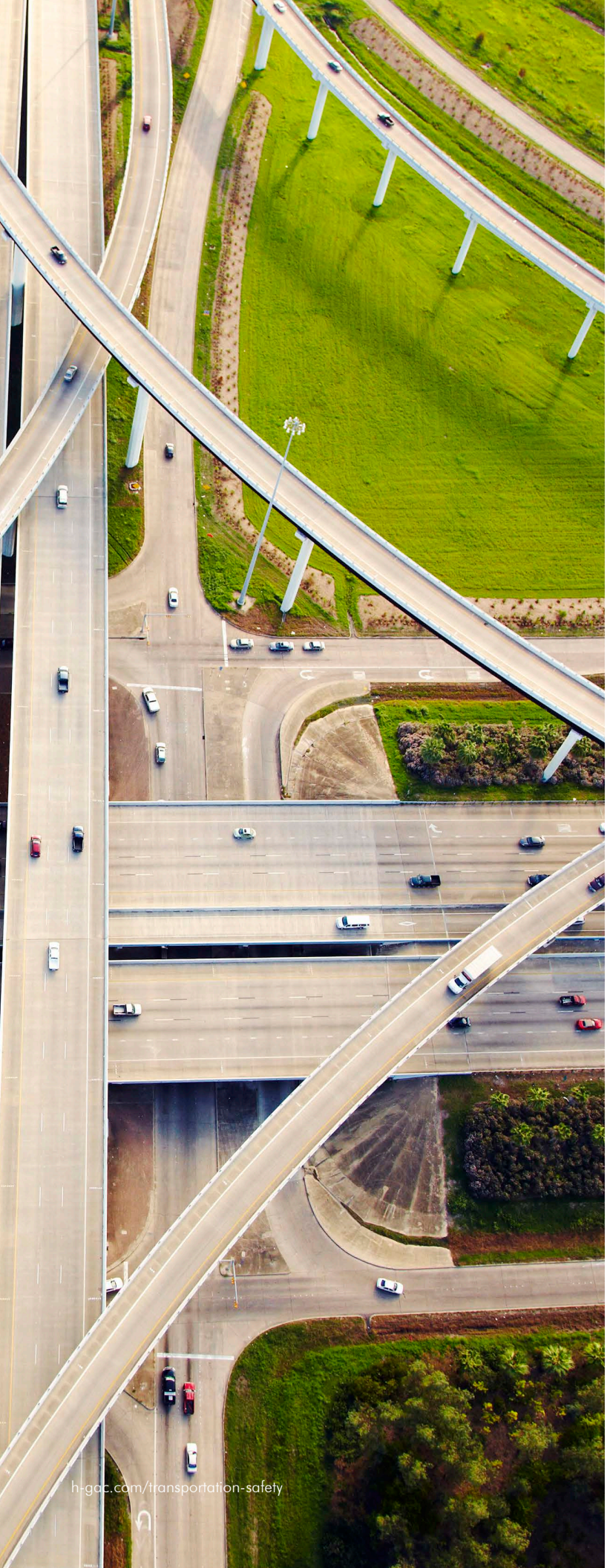
# Contents







# Introduction

The State of Safety Report is an annual overview of traffic crash incidents in the eight-county Transportation Management Area (TMA) , known as the Region. Utilizing Texas Department of Transportation (TxDOT) Crash Record Information System (CRIS) records, the report summarizes traffic crashes by county and incident type, are hereafter referred to as “crash type”. The crash types grouped by incident characteristics that contribute to most traffic crashes in the region.

The year 2020 will be long remembered as one of the most unprecedented years in recent history. The year was marks with many challenges and unique situations that tested our region, country, and indeed the entire world, in new and interesting ways. Traffic safety was no exception.

The COVID-19 pandemic, caused reductions in travel locally, nationally, and internationally. However, both locally and nationally, traffic fatalities, actually increased. The Federal Highway Administration (FHWA) estimates that miles travelled in the U.S. decreased by 13 percent in 2020. However, preliminary estimates from the National Highway Traffic Safety Administration (NHTSA) show that traffic fatalities increased 4.6 percent from January to September 2020. Likewise, the National Safety Council (NSC) [nsc.org] estimated that U.S. traffic fatalities increased 8 percent during 2020[2].

[1] A Transportation Management Area is an urbanized area of more than 200,000 people as defined by the Census Bureau (§23 USC 134(k); §49 USC 5303(k). The H-GAC Transportation Management Area includes Brazoria, Chambers, Fort Bend, Galveston, Harris, Montgomery, and Waller counties.

[2] National Safety Council, 2021 (https://injuryfacts.nsc.org/motor-vehicle/overview/preliminary-estimates/)

Table 1 compares the percentage change of crashes and fatalities for the United States, the State of Texas and the H-GAC Region from 2019 to 2020.

*Table 1: Traffic Crashes and Fatalities Percentage Comparison*

| LOCATION | Percentage of Crashes | Percentage of Fatalities |
|---|---|---|
| US † | N/A | +7% |
| Texas | -16% | +7% |
| H-GAC 8-County Region | -15% | +11% |

*†National Highway Traffic Safety Administration estimate (DOT HS 813 118)*

Traffic crashes in 2020 cost the Region an estimated $6.5 Billion based the NCS's methodology for calculating the cost of motor vehicle injuries. This figure was derived using 2019 cost of injury figures, which are the latest available cost estimates.

Table 2 summarizes the regional traffic crash experiences for 2020. Except for speeding and motorcycle crashes, all crash types decreased in 2020 versus 2019. The three largest decreases by percentage were railroad-related crashes (-27 percent), Commercial Vehicle crashes (-23 percent), and both Elderly Driver and Pedestrian crashes (-21 percent each).

*Table 2: 2020 Regional Crash Summary*

| CRASH TYPE | Total Crashes | Percentage of Crashes | Percentage of Changes 2019 | Fatalities | Serious Injuries |
|---|---|---|---|---|---|
| Regional | 149,510 | 100% | -15% | 737 | 3,409 |
| Speeding | 3,339 | 2% | 5% | 111 | 270 |
| Young Drivers (15-20 yrs.) | 25,406 | 17% | -13% | 27 | 191 |
| Elderly Driver (65 yrs. +) | 16,855 | 11% | -21% | 44 | 125 |
| Distracted Drivers | 19,478 | 13% | -16% | 11 | 246 |
| Commercial Vehicles | 7,667 | 5% | -23% | 63 | 197 |
| Impaired Driving (DUI) | 6,267 | 4% | -2% | 157 | 236 |
| Work Zones | 4,861 | 3% | -17% | 20 | 111 |
| Pedestrian | 1,641 | 1% | -21% | 164 | 333 |
| Bicycles | 746 | 0.5% | -13% | 34 | 86 |
| Motorcycles | 1,692 | 1% | 2% | 92 | 381 |
| Railroad-related Crashes | 362 | 0.2% | -27% | 1 | 13 |
| Intersection-related | 51,937 | 35% | -14% | 193 | 1,240 |
| Unrestrained | 3,178 | 2% | -8% | 179 | 377 |

Table 3 lists crash types that accounted for 10 percent or more of the Region's traffic fatalities in 2020. Only one of these crash types (Intersections) accounted for more than 5 percent of all regional crashes on its own. Yet, these six crash types are responsible for the overwhelming majority of the region's traffic fatalities.  Note that a fatality can be counted in multiple categories.

*Table 3: Top Traffic Crash Types by Percentage of Fatalities*

| CRASH TYPE | Percentage of Fatalities |
|---|---|
| Intersection-related | 26% |
| Pedestrian | 25% |
| Unrestrained | 24% |
| Impaired Driving (DUI) | 21% |
| Speeding | 15% |
| Motorcycles | 12% |

Trends for regional traffic crashes, fatalities, and serious injuries are shown in Figures 1-3. Fatalities have increased, 22 percent since 2018.

Contributing factors and preeminent characteristics for various crash types are included to provide context about the causes and conditions related to these traffic crashes.

1 crash per 4 minutes
1 fatality per 12 hours
1 serious injury per 3 hours

(2020 data only)

# 2020 Quick Facts

2020 observed results exeeded all forecasted results for all safety performance measures.


**Safety Performance Measures**

Total Fatalities
Total Serious Injuries
Fatality Rate per 100 Million Vehicle Miles Traveled
Serious Injury Rate per 100 Million Vehicle Miles Traveled
Total Nono-Motorized Fatalities and Serious Injuries

# Regional Totals

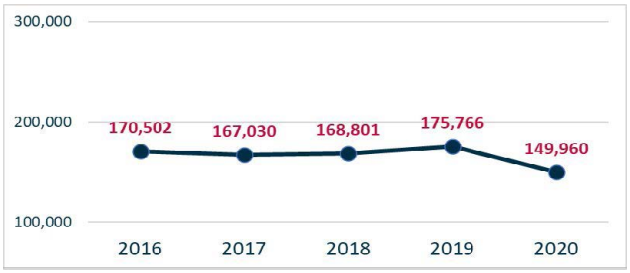



*Figure 1: 8-County Annual Traffic Crashes*


*Figure 2: 8-County Annual Traffic Fatalities*


*Figure 3: 8-County Annual Serious Injuries*

# Performance Measures

In 2016, FHWA implemented the Transportation Performance Management program (TPM). TPM is a strategic approach to transportation investment and decision-making utilizing a data-driven approach to achieve national performance goals.

As part of TPM, five traffic safety performance measures were established to track fatalities and serious injuries in public roadways. These performance measures are five-year rolling averages based on state crash data. The performance measures include:

1. Number of Fatalities

2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)

3. Number of Serious Injuries

4. Rate of Serious Injuries per 100 million VMT

5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries[3]

TPM establishes the process for State Departments of Transportation (DOT) and Metropolitan Planning Organizations (MPO) to establish and report their annual safety targets, as well as the process that FHWA will use to assess whether State DOTs have met or made significant progress toward meeting their safety targets.

MPOs may set their own safety targets or agree to support their state's safety targets. Either way, MPOs must calculate their safety targets and submit them to their State DOT. MPOs that chose to support their state's targets are not accountable for meeting their respective targets. H–GAC has chosen to support TxDOT's safety targets.

H-GAC changed its methodology for calculating its safety performance targets to align with a similar change implemented by TxDOT. Table 4 below lists the H-GAC 2019-2021 targets as well as the observed results for 2019 and 2020.

*Table 4: Federal Safety Performance Measures*

| PERFORMANCE MEASURES | 2019 Targets | 2019 Actuals † | 2020 Targets | 2020 Actuals † | 2021 Targets |
|---|---|---|---|---|---|
| Fatalities | 699 | 661 | 728 | **737** | 674 |
| Fatality Rate (per 100MVMT) | 1.0 | 1.0 | 1.1 | **1.2** | 1.1 |
| Serious Injuries | 3,568 | 3,380 | 3,293 | **3,409** | 3,287 |
| Serious Injury Rate (per 100MVMT) | 5.1 | **5.3** | 5.0 | **5.8** | 5.2 |
| Non-Motorized Fatalities & Serious Injuries †† | 581 | **733** | 537 | **674** | 648 |

*† Actuals based on TxDOT CRIS data as of January 4, 2021 & May 3, 2021. Numbers are subject to change; 2019 and 2020 Fatality Rates and Serious Injury Rates based on projected Annual VMT*

*†† Non-Motorized Fatalities and Serious Injuries Targets were incorrectly calculated for 2019 and 2020. The revised numbers represent what the 2019 and 2020 targets should have been.*

*Numbers in bold Red indicate actual results that are above the forecasted targets*

[3] Non-motorized only includes pedestrians and bicyclists

# Impaired Driving

Impaired driving[4] continues to be one of the region's most problematic crash types.

Impaired driving crashes made up over one-quarter of the Region's traffic fatalities from 2016 to 2020. Crashes increased 16 percent from 2017 to 2019 before decreasing slightly (2 percent) in 2020. Fatalities and serious injuries have varied. Five-year trends for crashes, fatalities, and serious injuries are shown in Figures 4-6.

Worse, the average blood alcohol content[5] of impaired drivers involved in crashes was more than twice (0.17) the legal limit of 0.08. Nearly half of all impaired crashes occur from 4 PM to midnight (Figure 7). Impaired driving crashes happed one-third of time on both highways and city streets (Figure 8). A little over 60 percent occur on Fridays, Saturdays, and Sundays (Figure 9).

1 crash per 90 minutes
1 fatality per 48 hours
1 serious injury per 48 hours

(Based on crashes from 2016-2020)

[4] Impairment is defined as "intoxicated" under Texas law. Intoxicated means not having the normal use of mental or physical faculties by reason of the introduction of alcohol, a controlled substance, a drug, a dangerous drug, a combination of two or more of those substances, or any other substance into the body; or, having a blood alcohol concentration of 0.08 or more (Texas Penal Code §49.01(2), as amended). Impaired driving or driving while intoxicated is illegal (Texas Penal Code §49.04, as amended).

[5] The weight of alcohol in a person's body (in grams) per 210 liters of breath, 100 milliliters of blood or 67 milliliters of urine (Texas Penal Code §49.01(1), as amended)


*Figure 4:Impaired Driving Crashes*

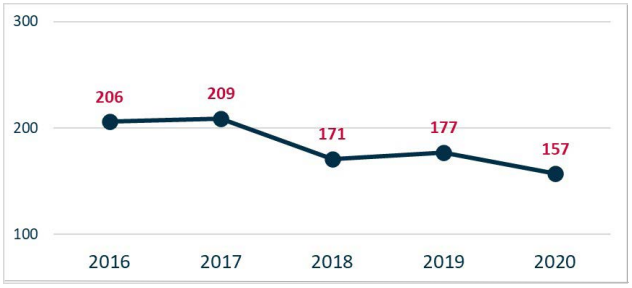



*Figure 5: Impaired Driving Fatalities*


*Figure 6: Impaired Driving Serious Injuries*

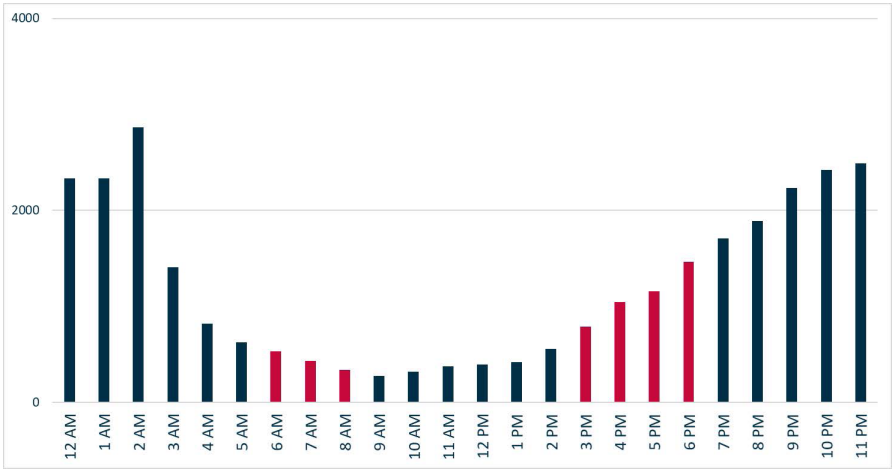



*Figure 7: Impaired Driving Crashes by Hour of Day*
*Peak Traffic Periods shown in Red*

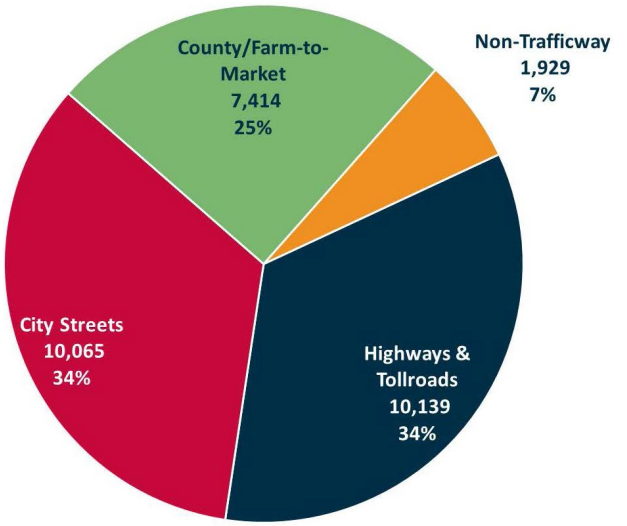



*Figure 8: Impaired Driving Crashes by Road Type*
*Non-Trafficway: Private property, park roads, parking lots, alleys, etc.*

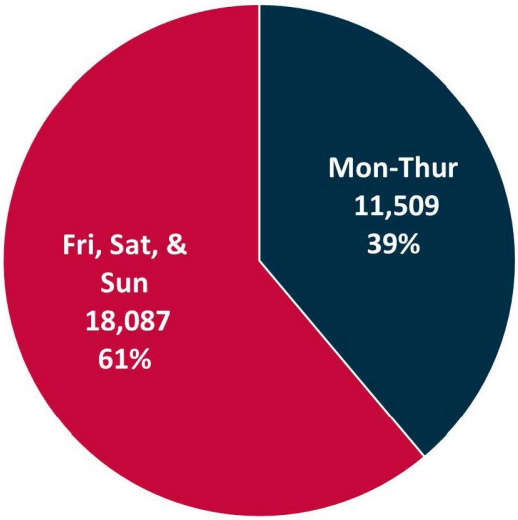



*Figure 9: Impaired Driving Crashes by Weekdays*


Surname Name
Hi, How are you doing?
10:15
Hi! Thanks, I'm fine. How are you?
10:17
I'm fine too, thanks. Do you want to go to Chineese for lunch today?
10:18
Today, I have lunch with clients. How about tomorrow?
10:20
Sounds good. Meet as usual at 12:30 in front of
A/0

# Distracted Driving

Distracted driving crashes occur due to driver inattention. Distracted driving was identified as a focus area in the 2018 Regional Safety Plan. At that time, distracted driving was responsible for 10 percent of the Region's traffic fatalities.

Distracted driving crashes decreased 27 percent from 2016 to 2020. Between 2019 and 2020 alone, they dropped by 16 percent. Moreover, distracted driving fatalities declined by two-thirds from 2017 to 2020. However, serious injuries resulting from distracted driving increased 13 percent over the same period of time. Five-year trends for distracted driving crashes, fatalities, and serious injuries are shown in Figures 10-12.

1 crash per 20 minutes
1 fatality per 17 days
1 serious injury per 36 hours

(Based on crashes from 2016-2020)

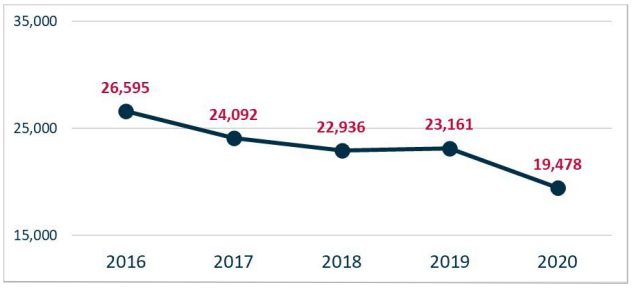



*Figure 10: Distracted Driving Crashes*

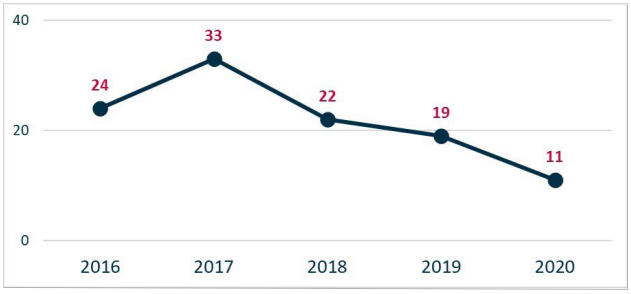



*Figure 11: Distracted Driving Fatalities*


*Figure 12: Distracted Driving Serious Injuries*

# Bicyclists

On average, a bicyclist is involved in a crash every 48 hours in our region. Figures 13-15 show the five-year trends for bicycle crashes, fatalities, and serious injuries. Table 5 details the factors for both bicyclists and drivers that contribute to these crashes. Figure 16 shows over half of all bicycle crashes happen during peak traffic periods.

More than half of bicycle crashes occur at intersections (Figure 17). This finding coincides with non-compliance as the highest contributing factor category for both bicyclists and drivers. The non-compliance includes disregarding traffic signs or signals and failing to yield right of way.

The importance of bicyclists wearing a helmet is illustrated in Table 6. The risk of death increases sevenfold for bicyclists that do not wear a helmet. The risk of serious injury and minor injury increases six times and five times, respectively, for non-helmet bicyclists.

1 crash per 12 hours
1 fatality per 15 days
1 serious injury per 4 days

(Based on crashes from 2016-2020)


*Figure 13: Bicyclist Crashes*

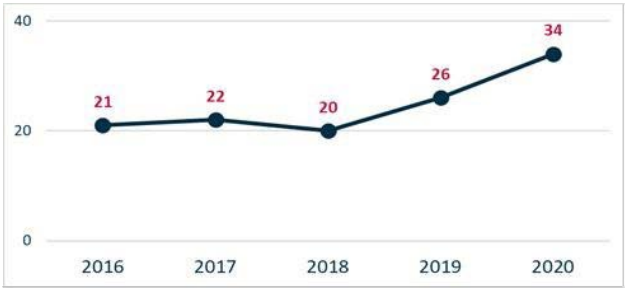



*Figure 14: Bicyclist Fatalities*

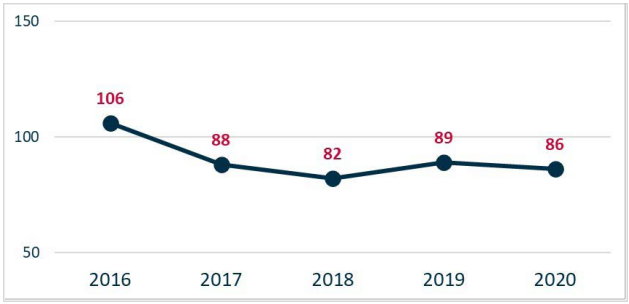



*Figure 15: Bicyclist Serious Injuries*

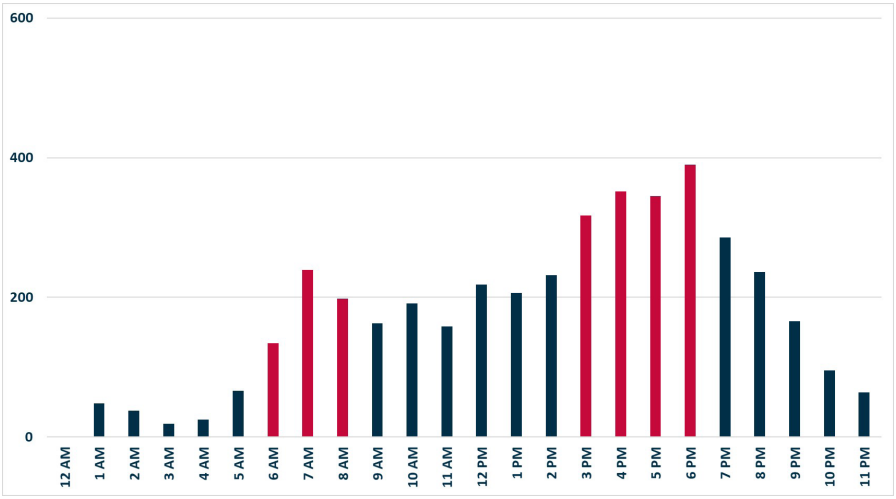



*Figure 16: Bicycle Crashes by Hour of Day (2016-2020)*
*Peak Traffic Periods shown in Red*

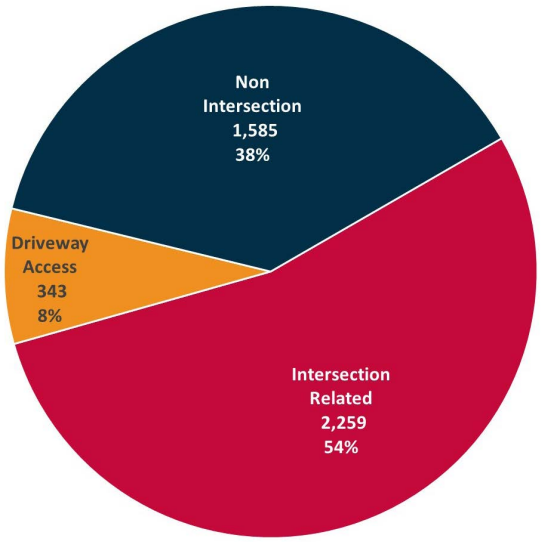



*Figure 17: Intersection-related Bicycle Crashes (2016-2020)*

*Table 5: Bicyclist - Driver Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Drivers | Percentage of Bicyclists |
|---|---|---|
| Non-Compliance | 56% | 63% |
| Vehicle Operations † | 12% | 19% |
| Inattention | 17% | 11% |
| Speeding | 13% | 2% |
| Driver Condition | 2% | 1% |
| Impaired | 1% | 2% |
| Vehicle Condition † | 0.2% | 2% |
| Mechanical | 0% | 0.1% |
| Illegal Action | 0% | 0.1% |
| TOTAL | 100% | 100% |

*†Bicycle is a vehicle under Texas law [Tex. Transp. Code Ann. §§541.201(23); 551.101]*

*Table 6: Bicycle Helmet Use vs Injury Severity*

| HELMET USAGE | Fatality | Serious Injury | Minor Injury |
|---|---|---|---|
| Worn | 14 | 59 | 244 |
| Not Worn | 103 | 353 | 1,144 |
| TOTAL | 117 | 412 | 1,388 |

# Pedestrians

In 2020, pedestrian crashes declined 21 percent. However, pedestrian fatalities remained virtually unchanged from 2019. Pedestrian fatalities are the second highest category of fatalities (25 percent) after intersection-related (26 percent).

Over five years (Figures 18-20), pedestrian crashes occurred at twice the rate of bicycle crashes. During the same time pedestrians were killed at six times the rate of bicyclist, and seriously injured about four times as often.

Non-compliance is also the most prevalent contributing factor for both pedestrians and drivers, as shown in Table 7. This category includes disregarding traffic signs or signals and failing to yield right of way. From 2019 to 2020, speeding increased 50 percent as the primary contributing factor in pedestrian crashes.

Over half of all pedestrian crashes in the region occur from 3-11 PM. The highest hourly percentage (8 percent) of pedestrian crashes occurs from 6-7 PM (Figure 21).

Interestingly, two-thirds of pedestrian crashes do not occur at intersections (Figure 22). Several factors potentially contribute to these non-intersection crashes. These include long street block lengths, spotty sidewalk coverage, and roads with little or no shoulder width. It is also worth noting that over one-quarter of pedestrian crashes occur in or on non-trafficways (Figure 23). As noted earlier, non-trafficways are parking lots, driveways, alleys, or other places that are not public roadways.

1 crash per 5 hours
1 fatality per 48 hours
1 serious injury per 24 hours

(Based on crashes from 2016-2020)


*Figure 18: Pedestrian Crashes*


*Figure 19: Pedestrian Fatalities*

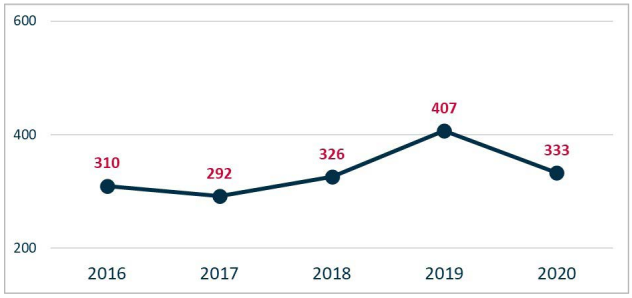



*Figure 20: Pedestrian Serious Injuries*

*Table 7: Pedestrian-Driver Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Drivers | Percentage of Pedestrians |
|---|---|---|
| Non-Compliance | 37% | 76% |
| Other | 11% | 19% |
| Impaired | 2% | 3% |
| Inattention | 18% | 1% |
| Driver Condition | 2% | 0.7% |
| Illegal Action | 0.1% | 0.3% |
| Vehicle Operations | 21% | — |
| Speeding | 9% | — |
| Vehicle Condition | 0.2% | — |
| Animal | 0.1% | — |
| Mechanical | 0.04% | — |
| TOTAL | 100% | 100% |

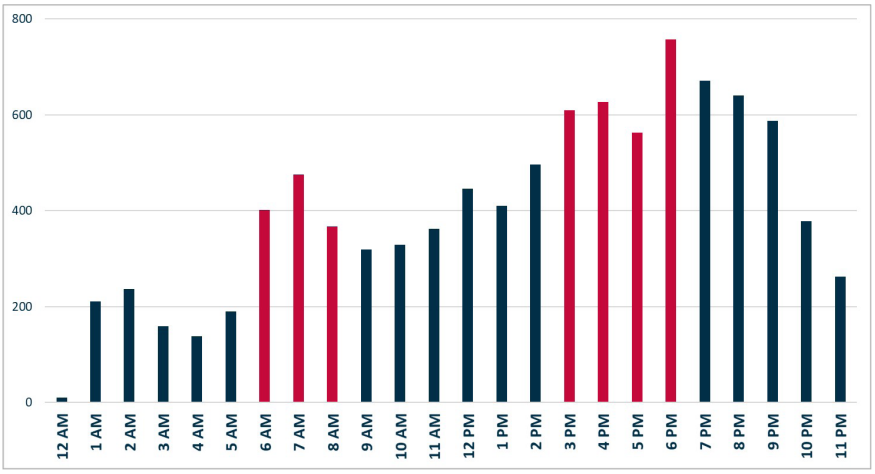



*Figure 21: Pedestrian Crashes by Hour of Day (2016-2020)*
*Peak Traffic Periods shown in red*

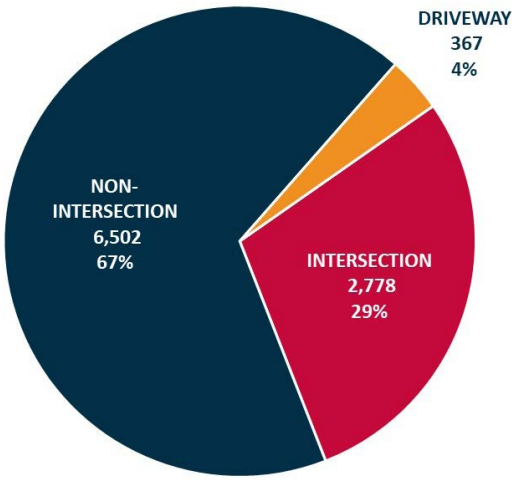



*Figure 22: Intersection-related Pedestrian Crashes (2016-2020)*

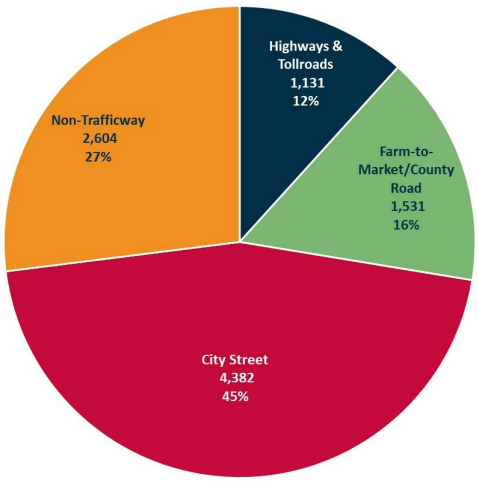



*Figure 23: Pedestrian Crashes by Road Type (2016-2020)*
*Non-Trafficway: Private property, park roads, parking lots, alleys, etc.*

# Speeding Occurrences

Speeding crashes increased five percent from 2019 to 2020, and speeding was responsible for more than 10 percent of the region's traffic fatalities from 2016 to 2020. The increase in speeding crashes was due in part to less roadway traffic and inconsistent speeding enforcement as a result of the pandemic. Annual totals for crashes, fatalities, and serious injuries are shown in Figures 24-26.

Figure 27 shows a month-to-month comparison of speeding crashes in 2019 to 2020. Relative to 2019, speeding generally increased in 2020 during months without travel restrictions.

1 crash per 3 hours
1 fatality per 4 days
1 serious injury per 48 hours

(Based on crashes from 2016-2020)

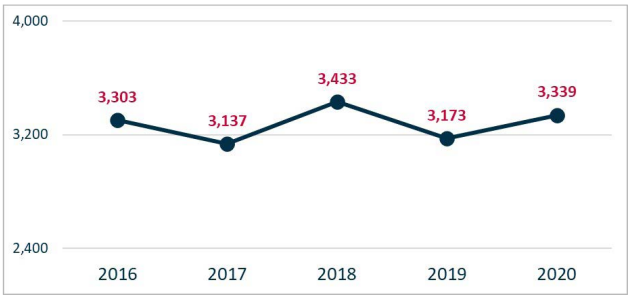



*Figure 24: Speeding Crashes*


*Figure 25: Speeding Fatalities*


*Figure 26: Speeding Serious Injuries*

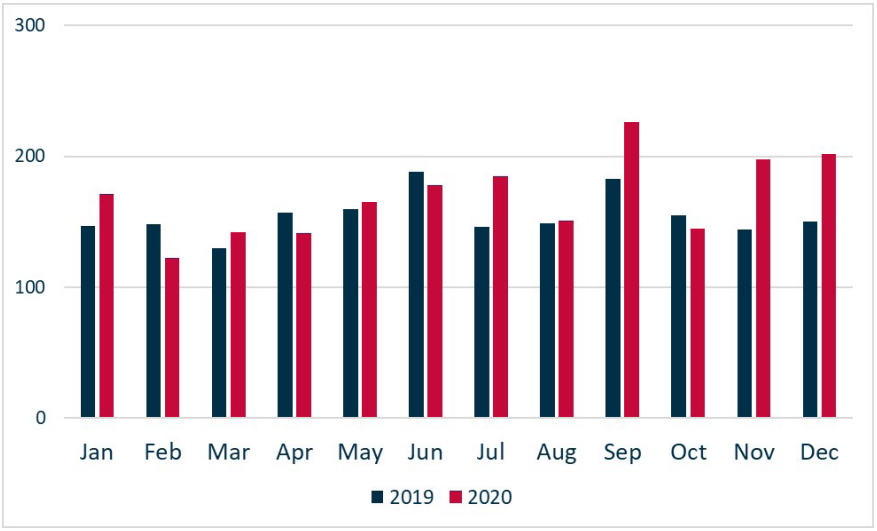



*Figure 27: Speeding Crashes Month-to-Month Comparison (2019-2020)*

# Young Drivers

## *(15-20 Years Old)*

Crashes involving young drivers (15-20 years old) account for nearly one-fifth of traffic crashes in the Region. Trends are shown in Figures 28-30.

The contributing factors in Table 8 attest to some of the issues facing young drivers. Their relative inexperience operating a motor vehicle and failure to adhere to rules of the road contribute heavily to traffic crashes.

1 crash per 20 minutes
1 fatality per 15 days
1 serious injury per 48 hours

(Based on crashes from 2016-2020)

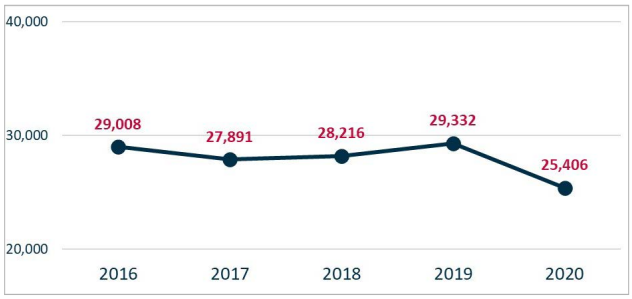



*Figure 28: Young Driver Crashes*

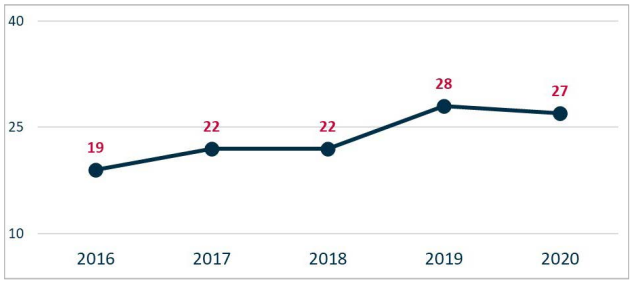



*Figure 29: Young Driver Fatalities**
** Only drivers ages 15-20 yrs. old. Does not include passengers or others who were killed.*

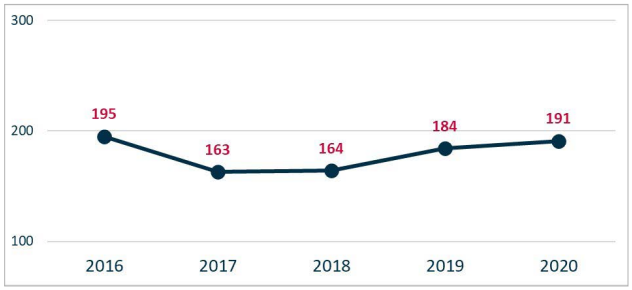



*Figure 30: Young Driver Serious Injuries**
*Only drivers ages 15-20 yrs. old. Does not include passengers or others that were seriously injured.*

*Table 8: Young Driver Crash Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Crashes |
|---|---|
| Speeding | 35% |
| Non-Compliance | 29% |
| Vehicle Operations | 24% |
| Inattention | 7% |
| Impaired | 1% |
| Other | 5% |
| TOTAL | 100% |

# Elder Drivers

## *(65 Years and Older)*

After four years of steady increases (17 percent increase from 2016 to 2019), traffic crashes involving elderly drivers declined 21 percent from 2019 to 2020. Treads for crashes, fatalities, and serious injuries are shown in Figures 31-33.

Interestingly, the factors contributing to elderly driver crashes (Table 9) are similar to those involving young drivers.

1 crash per 27 minutes
1 fatality per 9 days
1 serious injury per 36 hours

(Based on crashes from 2016-2020)

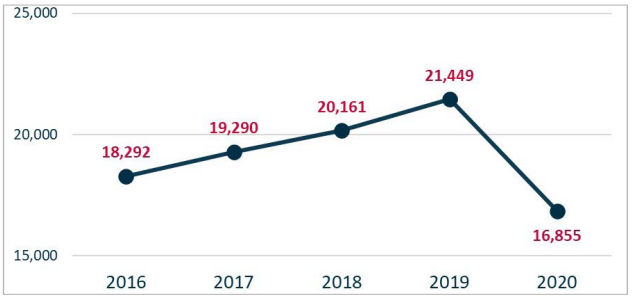



*Figure 31: Elderly Driver Crashes*


*Figure 32: Elderly Driver Fatalities**
** Drivers 65 yrs. old or older only. Does not include passengers or others killed.*


*Figure 33: Elderly Driver Serious Injuries**
** Drivers 65 yrs. old or older only. Does not include passengers or others seriously injured.*

*Table 9: Elderly Driver Crash Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Crashes |
|---|---|
| Non-Compliance | 33% |
| Speeding | 28% |
| Vehicle Operations | 26% |
| Inattention | 7% |
| Driver Condition | 1% |
| Impaired | 0.6% |
| Other | 4.4% |
| TOTAL | 100% |

# Motorcyclists

Motorcycle crashes and fatalities have generally declined since 2017. Motorcycle crashes represented just 1 percent of regional traffic crashes in 2020, yet they accounted for 12 percent of all traffic fatalities that year. Five-year annual totals are shown in Figures 34-36.

Table 10 shows the factors that contributed to regional motorcycle crashes. Speeding was the highest contributing factor in all motorcycle crashes.

Nearly 40 percent of motorcycle crashes occur during peak traffic periods (Figure 37). Almost 60 percent occur from noon to 8 PM.

As shown in Figure 38, motorcycle crashes are almost evenly split between weekdays and weekends. This equality suggests that motorcycles are heavily used for daily commuting throughout the Region. These crashes are almost evenly distributed amongst the different road types (Figure 39).

Table 11 shows that a majority of motorcycle riders are wearing helmets. However, when broken down by drivers and passengers, the percentage that wear helmets is reversed.

1 crash per 5 hours
1 fatality per 4 days
1 serious injury per 24 hours

(Based on crashes from 2016-2020)


*Figure 34: Motorcycle Crashes*


*Figure 35: Motorcycle Fatalities*
*Motorcycle Driver and Passenger(s) only*


*Figure 36: Motorcycle Serious Injuries*
*Motorcycle Driver and Passenger(s) only*

*Table 10: Motorcycle Crash Contributing Factors*

| CONTRIBUTING FACTORY CATEGORY | Percentage of Crashes |
|---|---|
| Speeding | 33% |
| Vehicle Operations | 29% |
| Non-Compliance | 26% |
| Inattention | 6% |
| Impaired | 3% |
| Animal | 2% |
| Illegal Action | 1% |
| Driver Condition | 1% |
| Vehicle Condition | 0.4% |
| Mechanical | 0.2% |
| GRAND TOTAL | 100% |

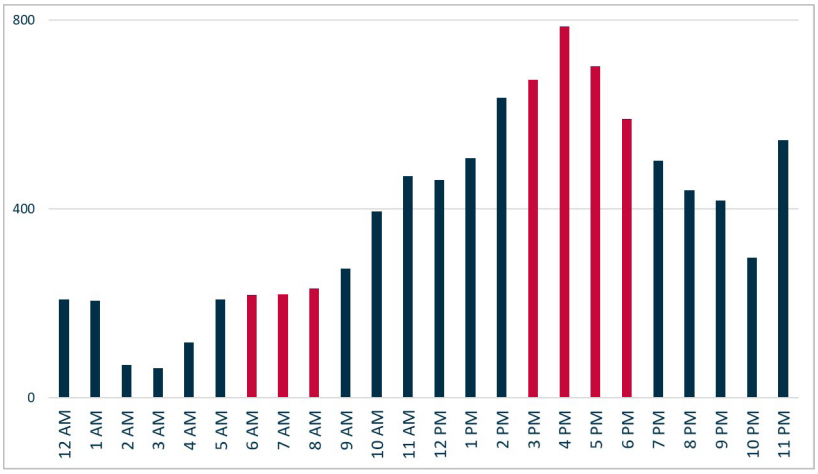



*Figure 37: Motorcycle Crashes by Hour of Day (2016-2020)*
*Peak traffic peaks shown in red*

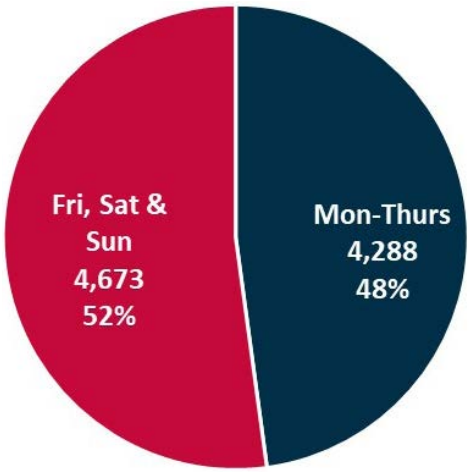



*Figure 38: Motorcycle Crashes by Weekday (2016-2020)*

*Table 11: Motorcycle Helmet Use*

| HELMET USE | Percentage of all Persons | Percentage of Drivers | Percentage of Passengers |
|---|---|---|---|
| Worn | 57% | 58% | 43% |
| Not Worn | 43% | 42% | 57% |
| TOTAL | 100% | 100% | 100% |

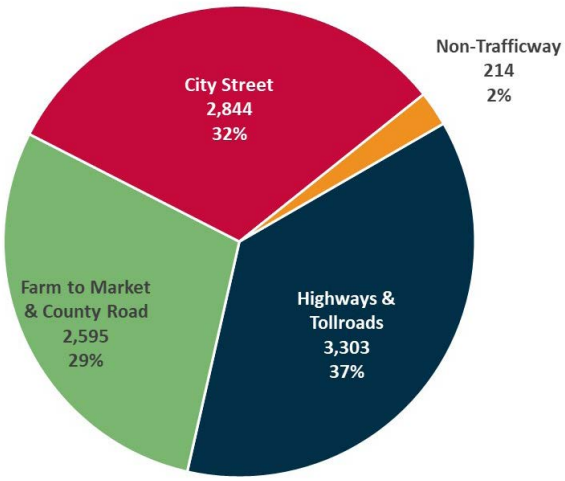



*Figure 39: Motorcycle Crashes by Road Class (2016-2020)*
*Non-Trafficway: Private property, park roads, parking lots, alleys, etc.*

# Unrestrained Persons

It is well established that seatbelts save lives. As Figure 40 illustrates, from 2012 to 2019 seatbelt usage in Texas is above or on par with seatbelt usage nationwide.

Crashes involving unrestrained drivers and occupants in the region have generally declined over the reporting period (Figure 41). However, after a four-year decline, fatalities increased sharply from 2019 to 2020, and serious injuries continued to increase for a third year (Figures 42 & 43).

Most distributing of all as shown in Table 12, roughly one in five of these occupants is a child under the age of 8 years old. An additional 41 percent of unrestrained occupants are children ages 8-15 years. This means that well over half of all unrestrained occupants involved in crashes are children. Texas law requires children younger than 8 years old or under 4 feet 11 inches tall be properly restrained in a child passenger safety seat system (Texas Transportation Code §545.412). The law further requires all vehicle occupants to wear a seatbelt (Texas Transportation Code §545.413).

1 crash per 3 hours
1 fatality per 48 hours
1 serious injury per 24 hours

(Based on crashes from 2016-2020)

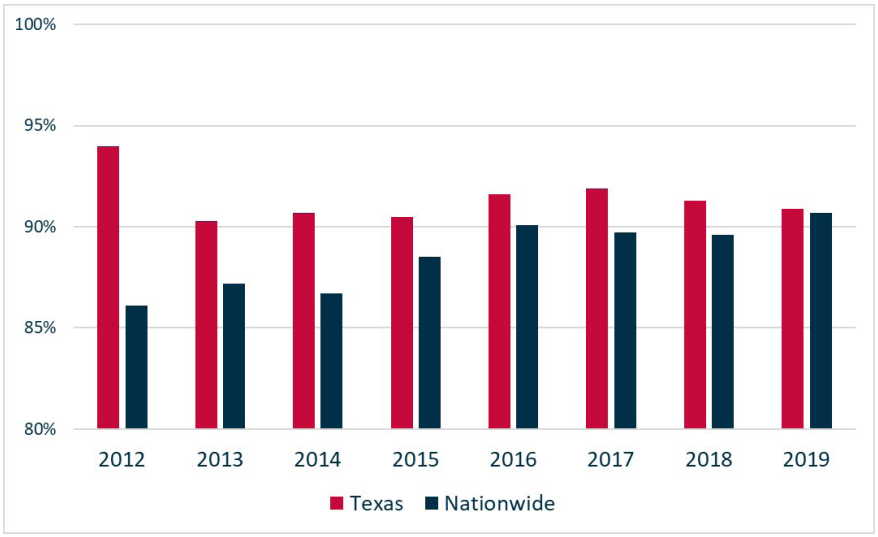



*Figure 40: Seatbelt Use Comparison (2012-2019)*
*Source: Seat Belt Use in 2019—Use Rates in the States and Territories, National Traffic Highway Safety Administration (https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812947)*


*Figure 41: Unrestrained Occupant Crashes*

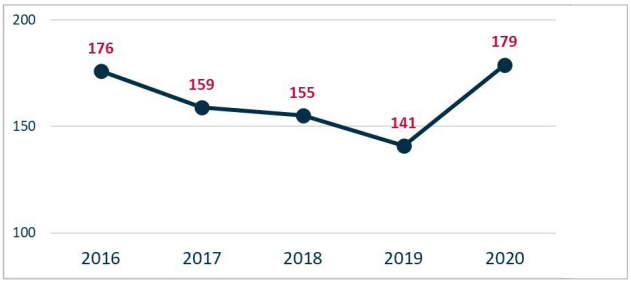



*Figure 42: Unrestrained Occupant Fatalities*


*Figure 43: Unrestrained Occupant Serious Injuries*

*Table 12: Unrestrained Drivers and Passengers by Age Groups*

| AGE GROUP | Percentage of Drivers | Percentage of Passengers/Occupants |
|---|---|---|
| < 8 years | 0% | 16% |
| 8-15 years | 2% | 41% |
| 16-20 years | 12% | 16% |
| 21-24 years | 15% | 4% |
| 25-34 years | 30% | 9% |
| 35-44 years | 18% | 5% |
| 45-64 years | 19% | 7% |
| 65+ years | 4% | 2% |
| TOTAL | 100% | 100% |

# Commercial Vehicles

Commercial vehicle[6] crashes decreased 23 percent in 2020 (Figure 44). However, commercial vehicle fatalities and serious injuries increased in 2020 (Figures 45 and 46).

Table 13 shows that vehicle operation, speeding, and disregarding rules of the road are the major factors contributing to commercial vehicle crashes. Over 40 percent of commercial vehicle crashes occur during peak traffic periods (Figure 47). Figure 48 shows that half these crashes happen on highways and toll roads. As indicated in Figure 49, most commercial vehicle crashes do not occur at intersection. Additionally, adverse weather is a factor in only 9 percent of commercial vehicle crashes (Figure 50).

Semi-tractor/trailers and large buses account for nearly 60 percent of the commercial vehicles involved in crashes throughout the region (Table 14).

1 crash per 60 minutes
1 fatality per 7 days
1 serious injury per 48 hours

(Based on crashes from 2016-2020)

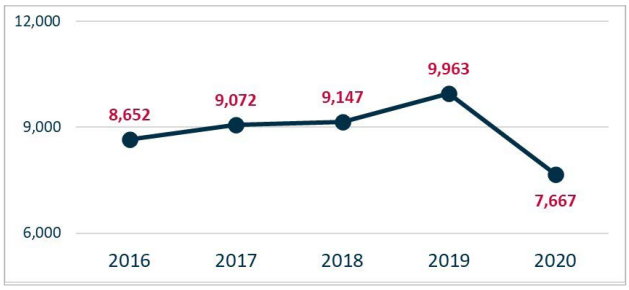



*Figure 44: Commercial Vehicle Crashes*


*Figure 45: Commercial Vehicle Fatalities*
*Commercial Vehicle Driver only*


*Figure 46: Commercial Vehicle Serious Injuries*
*Commercial Vehicle Driver only*

[6] A Commercial Motor Vehicle is any vehicle or combination of vehicles with a gross weight rating of more than 10,000 pounds, or vehicle used to transport hazardous materials in a quantity requiring placarding by a regulation issued under the Hazardous Materials Transportation Act (49 U.S.C. Section 5101 et. seq.) (Texas Transportation Code § 548.001).

*Table 13: Commercial Vehicle Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Crashes |
|---|---|
| Vehicle Operations | 46% |
| Speeding | 21% |
| Non-Compliance | 15% |
| Other | 8% |
| Inattention | 6% |
| Vehicle Condition | 2% |
| Impaired | 1% |
| Driver Condition | 1% |
| Mechanical | 0.5% |
| Animal | 0.2% |
| Illegal Action | 0.1% |
| TOTAL | 100% |

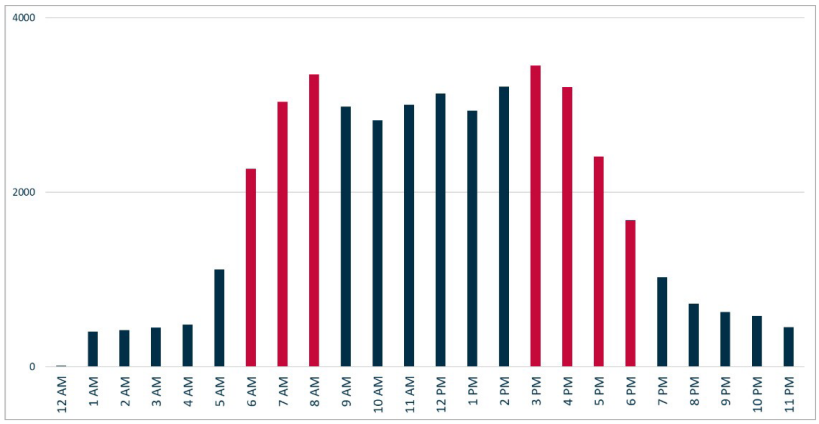



*Figure 47: Commercial Vehicle Crashes by Hour of Day (2016-2020)*

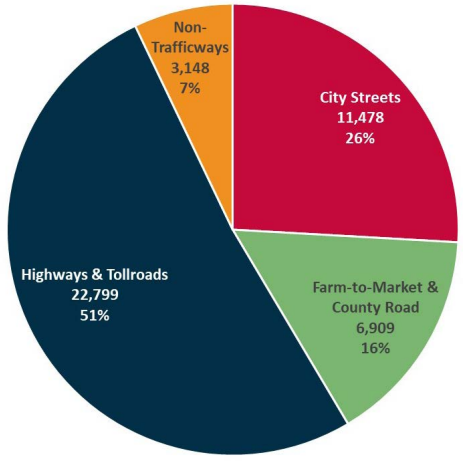



*Figure 48: Commercial Vehicle Crashes by Road Class (2016-2020)*
*Non-Trafficway: Private property, park roads, parking lots, alleys, etc.*

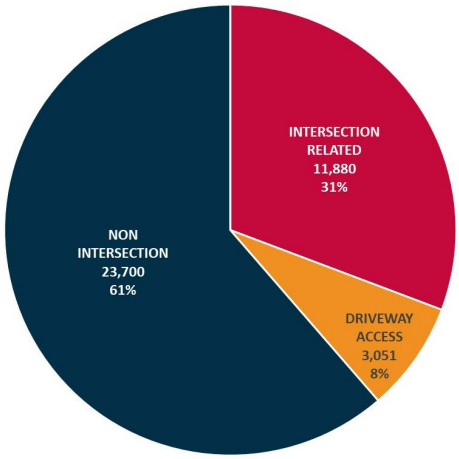



*Figure 49: Commercial Vehicle Crashes by Intersection Relatedness (2016-2020)*

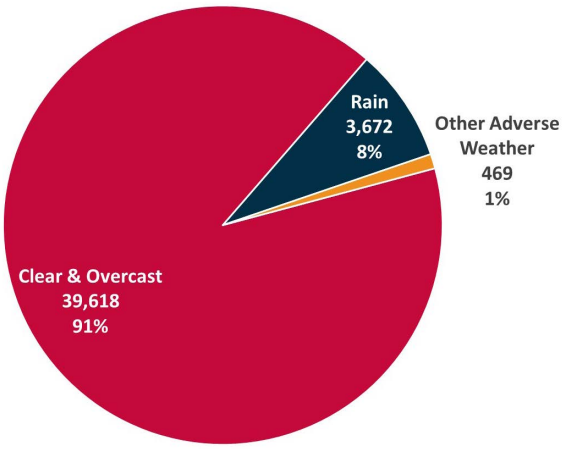



*Figure 50: Commercial Vehicle Crash Weather Conditions (2016-2020)*

*Table 14: Commercial Vehicle Crash Vehicle Types (2016-2020)*

| COMMERCIAL VEHICLE TYPE | Percentage of Crashes |
|---|---|
| Van/Enclosed Box | 25% |
| Flatbed | 18% |
| Bus (>15 Passengers) | 14% |
| Other | 9% |
| Dump Truck | 9% |
| Cargo Tanker | 7% |
| Vehicle Towing Another Vehicle | 5% |
| Bus (9-15 Passengers) | 3% |
| Concrete Mixer | 2% |
| Garbage Refuse | 2% |
| Intermodal (Shipping Containers) | 2% |
| Auto Transporter | 2% |
| Pole | 1% |
| Grain, Chips, or Gravel Hauler | 1% |
| Logging | 0.1% |
| TOTAL | 100% |

# Work Zones

Work zone traffic crashes are motor vehicle crashes that occur in a signed construction or maintenance zones, regardless of whether the crash was related to the construction or maintenance. Annual totals for crashes, fatalities and serious injuries are shown in Figures 51-53.

Nearly half (47 percent) of all work zone crashes occur during peak traffic periods (Figure 54). Speeding, vehicle operation, and lawful compliance are the major contributing factors in most work zone crashes as listed in Table 15. Two-thirds of all work zone crashes occur on the region's highways and toll roads (Figure 55). Adverse weather conditions are usually not a factor in work zone crashes (Figure 56).

1 crash per 2 hours
1 fatality per 16 days
1 serious injury per 4 days

(Based on crashes from 2016-2020)


*Figure 51: Work Zone Crashes*


*Figure 52: Work Zone Fatalities*


*Figure 53: Work Zone Serious Injuries*

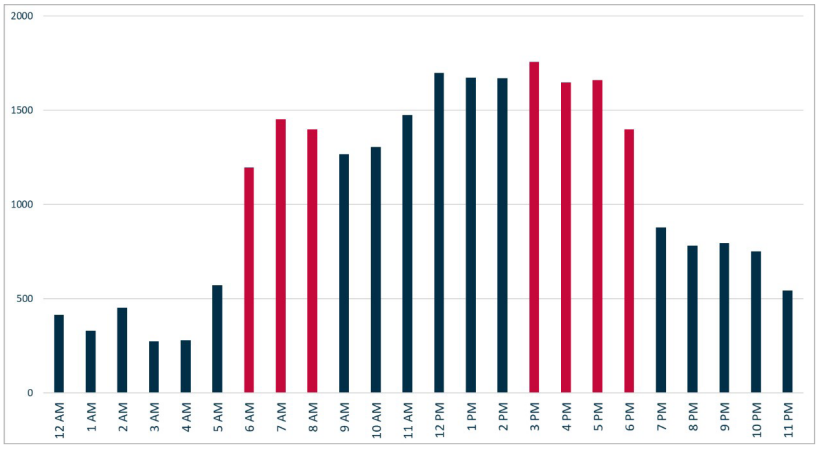



*Figure 54: Work Zone Crashes by Hour of Day (2016-2020)*
*Peak Traffic Periods shown in Red*

*Table 15: Work Zone Crash Contributing Factors*

| CONTRIBUTING FACTOR CATEGORY | Percentage of Crashes |
|---|---|
| Speeding | 41% |
| Vehicle Operations | 30% |
| Non-Compliance | 16% |
| Inattention | 6% |
| Other | 5% |
| Impaired | 2% |
| Driver Condition | 1% |
| Vehicle Condition | 0.4% |
| Mechanical | 0.3% |
| Animal | 0.2% |
| Illegal Action | 0.2% |
| TOTAL | 100% |

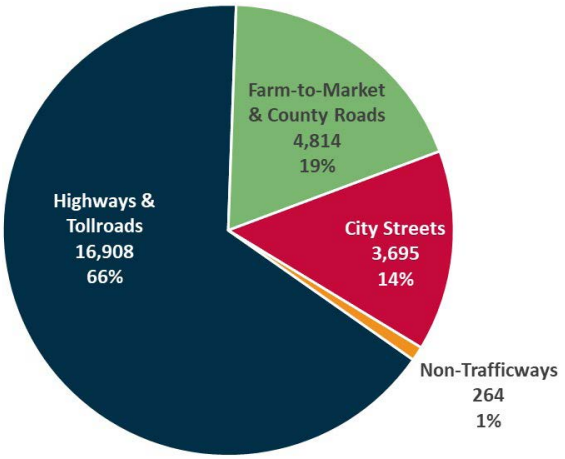



*Figure 55: Work Zone Crashes by Road Class (2016-2020)*
*Non-Trafficway: Private property, park roads, parking lots, alleys, etc.*

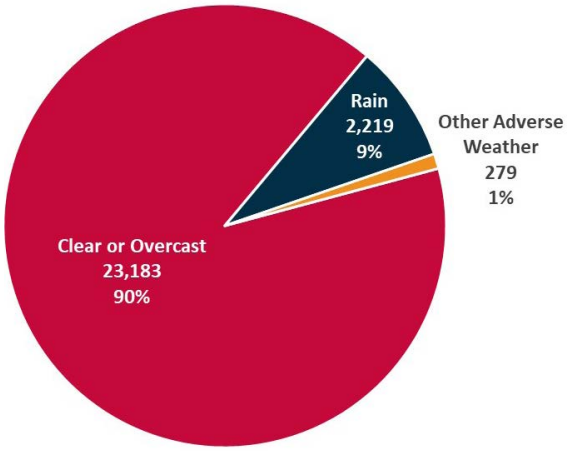



*Figure 56: Work Zone Crash Weather Conditions (2016-2020)*


# Railroad Crossings

Two types of railroad crashes are tracked in this report. The first type are at-grade crossing crashes and the second type are railroad-related incidents.

At-grade crossing crashes, also known as Highway-Rail Grade Crossing Incidents, are defined as, "any impact between on-track railroad equipment and a highway user at a highway-rail grade crossing" (Federal Railroad Administration (FRA) Guide for preparing accident/incident reports, 2011). At-grade crashes are investigated by the National Transportation Safety Board (49 CFR §831.40).

Railroad-related incidents are defined as a crash involving or related to a train, rail car, or railroad crossing (TxDOT Instructions to Police for Reporting Crashes, 2018). This definition includes instances where railroad crossing signal equipment is struck by a vehicle or when two vehicles collide at a railroad crossing and no train is present. Railroad-related incidents are typically investigated by state and/or local law enforcement but may involve federal agencies and TxDOT depending on the location and nature of the incident.

The FRA collects data on highway-rail grade crossing incidents. TxDOT collects data on railroad-related incidents. The data for highway-rail grade crossing incidents and railroad-related incidents are not complementary.

Figures 57-62 describe the five-year crash experience for both at-grade and railroad-related crashes, fatalities, and serious injuries.

## Railroad-related


*Figure 57: Railroad-related Crashes*

## At-Grade Crossings


*Figure 58: At-grade Crossing Crashes*


*Figure 59: Railroad-related Fatalities*

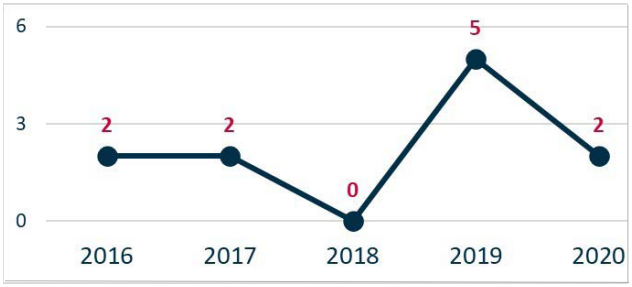



*Figure 60: At-grade Crossing Fatalities*
*Includes RR workers and Train Passengers*


*Figure 61: Railroad-related Serious Injuries*


*Figure 62: At-grade Crossing Serious Injuries*
*Includes RR workers and Train Passengers*

Figure 63 compares railroad-related and at-grade crossing crashes by hour of day. While at-grade crossing crashes remain constant throughout the day, railroad-related crashes spike at 2 AM and then generally increase from 4 AM throughout the day until 6 PM.

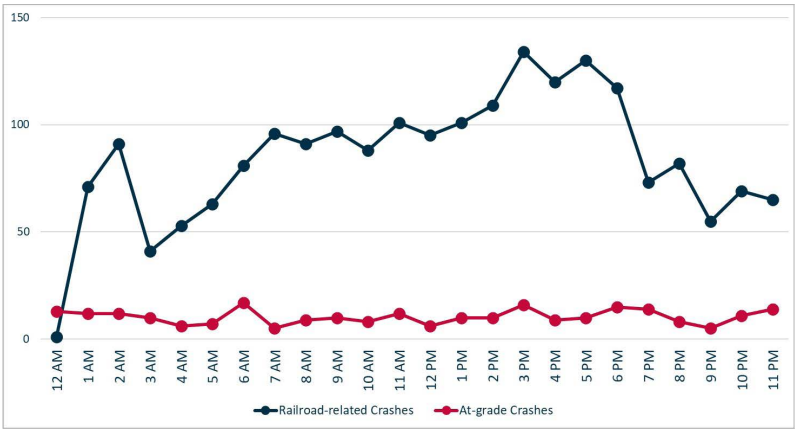



*Figure 63: Railroad-related & At-grade Crossing Crashes by Hour of Day (2016-2020)*

Table 16 lists the high-frequency at-grade crossing crash locations in the region from 2016 to 2020. These are locations with two or more at-grade crossing crashes in the five-year reporting period. These same locations are depicted on the map in Figure 64.

*Table 16: High Frequency At-grade Crossing Crash Locations (2016-2020)*

| # | COUNTY | CITY | STREET | Crashes | Fatalities | Injuries |
|---|---|---|---|---|---|---|
| 1 | Harris | Houston | Long/Griggs/Mykawa | 13 | 0 | 4 |
| 2 | Fort Bend | Missouri City | ALT 90 @ S Cravens Rd | 8 | 0 | 6 |
| 3 | Harris | Houston | ALT 90 @ Fondren Rd | 8 | 1 | 2 |
| 4 | Harris | N/A | Dorsett @ Signet | 6 | 0 | 0 |
| 5 | Harris | Houston | Scott St @ Holmes Rd | 6 | 0 | 7 |
| 6 | Harris | Houston | Up Englewood Yard Entrance - Liberty Rd | 5 | 0 | 0 |
| 7 | Harris | Houston | Heights Blvd near Center St | 5 | 0 | 2 |
| 8 | Harris | Houston | Lawndale St @ Collier St | 4 | 0 | 1 |
| 9 | Harris | Houston | San Jacinto Blvd @ Jacintoport Blvd | 4 | 0 | 0 |
| 10 | Fort Bend | Sugar Land | ALT 90 @ SH 6 Southbound Frontage Rd | 3 | 0 | 0 |
| 11 | Harris | Houston | Airport Blvd @ Mykawa | 3 | 0 | 2 |
| 12 | Harris | Houston | ALT 90 @ Hillcroft Ave | 3 | 0 | 0 |
| 13 | Harris | Houston | Lyons Ave near Sakowitz St | 3 | 0 | 2 |
| 14 | Liberty | Dayton | US 90 @ Waco St | 3 | 0 | 0 |
| 15 | Brazoria | Angleton | S Downing Rd near E Mulberry St (SH 35) | 2 | 0 | 0 |
| 16 | Brazoria | Freeport | N Velasco Blvd (FM 523) near FM 1495 | 2 | 0 | 0 |
| 17 | Chambers | Mont Belvieu | Crosby Rd (FM 1942) near Oilfield Rd | 2 | 0 | 1 |
| 18 | Fort Bend | Missouri City | ALT 90 @ S Gessner Rd | 2 | 0 | 0 |
| 19 | Fort Bend | Richmond | ALT 90 @ FM 359 | 2 | 0 | 0 |
| 20 | Fort Bend | Rosenburg | Walnut Ave @ SH 36 | 2 | 0 | 0 |
| 21 | Fort Bend | Sugar Land | ALT 90 @ Eldridge Rd | 2 | 0 | 0 |
| 22 | Fort Bend | Sugar Land | ALT 90 @ Harlem Rd | 2 | 1 | 1 |
| 23 | Galveston | Texas City | Loop 197 @ SH 146 | 2 | 0 | 3 |
| 24 | Harris | Galena Park | Kinder Morgan Private Crossing | 2 | 0 | 0 |
| 25 | Harris | Houston | Armco Private Crossing (Gate 5) | 2 | 0 | 0 |
| 26 | Harris | Houston | ALT 90 @ Haviland St | 2 | 0 | 0 |
| 27 | Harris | Houston | Roy St @ Allen St | 2 | 0 | 2 |
| 28 | Harris | Houston | Sherwin St near Cornish St | 2 | 0 | 0 |
| 29 | Harris | La Porte | Bay Area Blvd @ Port Dr | 2 | 0 | 0 |
| 30 | Harris | South Houston | Winkler Dr @ SH 3 | 2 | 0 | 2 |
| 31 | Liberty | Dayton | Gun Grove (CR 621) near FM 686 | 2 | 0 | 25 |

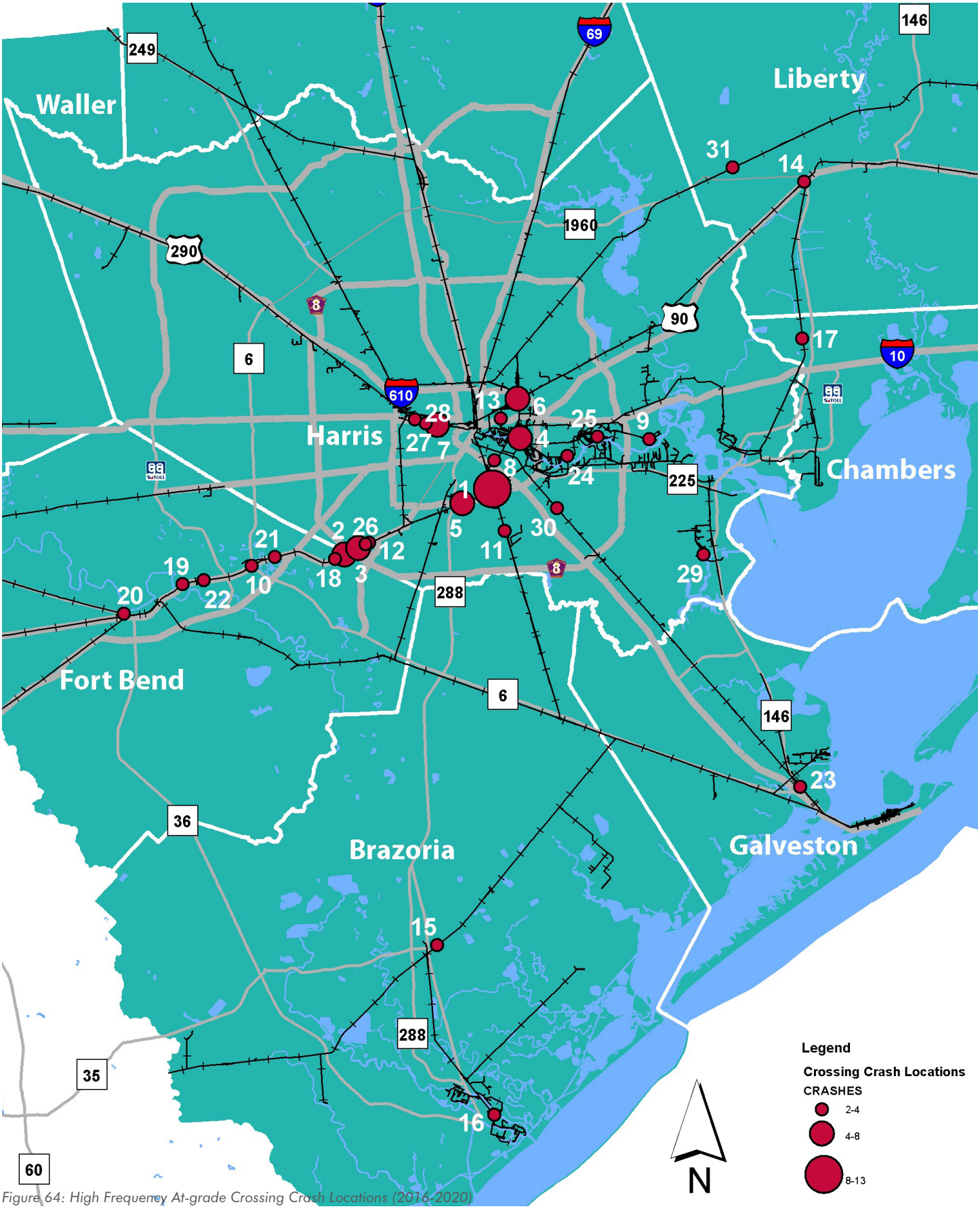



*Figure 64: High Frequency At-grade Crossing Crash Locations (2016-2020)*

*Figure 65: Example of angle or "T-Bone" motor vehicle crash*

# Intersections

Over one-quarter of the region's traffic fatalities in 2020 occurred at roadway intersections. Figures 66-68 show crashes, fatalities, and serious injuries for intersection traffic crashes.

Table 17 shows the percent of intersection collision types and corresponding percentage of fatalities for each collision type. Angle collisions are also known as "broadside" or "T-bone" collisions as shown in Figure 65. they are the most common and deadliest type of intersection collision in the Region.

1 crash per 9 minutes
1 fatality per 48 hours
1 serious injury per 8 hours

(Based on crashes from 2016-2020)


*Figure 66: Intersection Crashes*


*Figure 67: Intersection Crash Fatalities*
*All parties involved in the crash*


*Figure 68: Intersection Crash Serious Injuries*
*All parties involved in the crash*

*Table 17: Percentage of Intersection Crashes and Fatalities by Collision Type*

| COLLISION TYPE | Percentage of Crashes | Percentage of Fatalities |
|---|---|---|
| Angle | 62% | 61% |
| Single Vehicle | 8% | 27% |
| Rear End | 26% | 11% |
| Head On | 0.4% | 1% |
| Sideswipe | 4% | 0.4% |

# Appendix

## REGIONAL TOTALS

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 6,120 | 6,127 | 6,648 | 7,232 | 6,172 | 32,299 |
| Chambers | 1,286 | 1,247 | 1,399 | 1,500 | 1,381 | 6,813 |
| Fort Bend | 10,703 | 11,024 | 10,895 | 11,203 | 9,058 | 52,883 |
| Galveston | 8,151 | 8,208 | 8,495 | 8,522 | 7,773 | 41,149 |
| Harris | 131,470 | 127,788 | 127,940 | 133,307 | 113,729 | 634,234 |
| Liberty | 1,322 | 1,471 | 1,535 | 1,723 | 1,489 | 7,540 |
| Montgomery | 10,541 | 10,316 | 10,819 | 11,069 | 9,442 | 52,187 |
| Waller | 909 | 849 | 1,070 | 1,210 | 916 | 4,954 |
| TOTAL | 170,502 | 167,030 | 168,801 | 175,766 | 149,960 | 682,099 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 48 | 46 | 31 | 48 | 44 | 217 |
| Chambers | 21 | 7 | 20 | 6 | 11 | 65 |
| Fort Bend | 38 | 40 | 30 | 41 | 32 | 181 |
| Galveston | 45 | 40 | 41 | 39 | 41 | 206 |
| Harris | 467 | 465 | 403 | 438 | 505 | 2,278 |
| Liberty | 20 | 38 | 21 | 24 | 29 | 132 |
| Montgomery | 76 | 55 | 48 | 55 | 55 | 289 |
| Waller | 7 | 24 | 11 | 10 | 20 | 72 |
| TOTAL | 722 | 715 | 605 | 661 | 737 | 3,440 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 233 | 152 | 208 | 176 | 204 | 973 |
| Chambers | 33 | 71 | 65 | 32 | 42 | 243 |
| Fort Bend | 192 | 210 | 206 | 185 | 233 | 1,026 |
| Galveston | 159 | 217 | 191 | 209 | 167 | 943 |
| Harris | 2,351 | 2,231 | 2,054 | 2,403 | 2,396 | 11,435 |
| Liberty | 77 | 69 | 56 | 79 | 65 | 346 |
| Montgomery | 306 | 341 | 239 | 251 | 254 | 1,391 |
| Waller | 50 | 35 | 31 | 45 | 48 | 209 |
| TOTAL | 3,401 | 3,326 | 3,050 | 3,380 | 3,409 | 16,566 |

## SPEEDING OCCURRENCES

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 323 | 278 | 316 | 292 | 264 | 1,473 |
| Chambers | 110 | 116 | 173 | 119 | 123 | 641 |
| Fort Bend | 182 | 161 | 171 | 122 | 149 | 785 |
| Galveston | 178 | 206 | 229 | 191 | 205 | 1,009 |
| Harris | 1,739 | 1,626 | 1,726 | 1,700 | 1,972 | 8,763 |
| Liberty | 112 | 115 | 137 | 117 | 106 | 587 |
| Montgomery | 560 | 518 | 558 | 524 | 408 | 2,568 |
| Waller | 99 | 117 | 123 | 108 | 112 | 559 |
| TOTAL | 3,303 | 3,137 | 3,433 | 3,173 | 3,339 | 16,385 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 5 | 18 | 8 | 9 | 3 | 43 |
| Chambers | 2 | 0 | 3 | 1 | 0 | 6 |
| Fort Bend | 2 | 2 | 3 | 1 | 4 | 12 |
| Galveston | 3 | 4 | 8 | 5 | 4 | 24 |
| Harris | 62 | 56 | 48 | 50 | 77 | 293 |
| Liberty | 3 | 4 | 1 | 2 | 3 | 13 |
| Montgomery | 9 | 11 | 16 | 12 | 13 | 61 |
| Waller | 1 | 2 | 3 | 0 | 7 | 13 |
| TOTAL | 87 | 97 | 90 | 80 | 111 | 465 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 29 | 18 | 22 | 17 | 26 | 112 |
| Chambers | 4 | 11 | 14 | 6 | 10 | 45 |
| Fort Bend | 7 | 5 | 13 | 4 | 15 | 44 |
| Galveston | 10 | 18 | 21 | 18 | 20 | 87 |
| Harris | 94 | 88 | 99 | 86 | 150 | 517 |
| Liberty | 7 | 8 | 2 | 15 | 10 | 42 |
| Montgomery | 26 | 46 | 34 | 33 | 30 | 169 |
| Waller | 11 | 3 | 5 | 8 | 9 | 36 |
| TOTAL | 188 | 197 | 210 | 187 | 270 | 1,052 |

## YOUNG DRIVERS

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 1,328 | 1,329 | 1,378 | 1,511 | 1,314 | 6,860 |
| Chambers | 227 | 218 | 277 | 256 | 236 | 1,214 |
| Fort Bend | 2,310 | 2,382 | 2,315 | 2,335 | 1,943 | 11,285 |
| Galveston | 1,546 | 1,473 | 1,643 | 1,653 | 1,406 | 7,721 |
| Harris | 20,730 | 19,612 | 19,664 | 20,633 | 17,959 | 98,598 |
| Liberty | 268 | 330 | 286 | 315 | 292 | 1,491 |
| Montgomery | 2,439 | 2,388 | 2,445 | 2,364 | 2,106 | 11,742 |
| Waller | 160 | 159 | 208 | 265 | 150 | 942 |
| TOTAL | 29,008 | 27,891 | 28,216 | 29,332 | 25,406 | 139,853 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 2 | 2 | 0 | 2 | 1 | 7 |
| Chambers | 0 | 0 | 1 | 0 | 1 | 2 |
| Fort Bend | 2 | 1 | 3 | 2 | 2 | 10 |
| Galveston | 0 | 0 | 0 | 2 | 0 | 2 |
| Harris | 13 | 12 | 14 | 16 | 17 | 72 |
| Liberty | 0 | 1 | 0 | 2 | 1 | 4 |
| Montgomery | 2 | 5 | 4 | 4 | 4 | 19 |
| Waller | 0 | 1 | 0 | 0 | 1 | 2 |
| TOTAL | 19 | 22 | 22 | 28 | 27 | 118 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 13 | 8 | 14 | 9 | 25 | 69 |
| Chambers | 3 | 4 | 2 | 4 | 1 | 14 |
| Fort Bend | 14 | 11 | 13 | 7 | 18 | 63 |
| Galveston | 8 | 11 | 8 | 13 | 0 | 40 |
| Harris | 128 | 98 | 105 | 125 | 125 | 581 |
| Liberty | 8 | 5 | 6 | 6 | 4 | 29 |
| Montgomery | 17 | 23 | 15 | 18 | 18 | 91 |
| Waller | 4 | 3 | 1 | 2 | 0 | 10 |
| TOTAL | 195 | 163 | 164 | 184 | 191 | 897 |

## ELDERLY DRIVERS

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 849 | 820 | 973 | 1087 | 897 | 4,626 |
| Chambers | 128 | 149 | 153 | 163 | 158 | 751 |
| Fort Bend | 1357 | 1570 | 1615 | 1655 | 1276 | 7,473 |
| Galveston | 1263 | 1311 | 1383 | 1453 | 1261 | 6,671 |
| Harris | 12902 | 13573 | 13967 | 14893 | 11507 | 66,842 |
| Liberty | 208 | 213 | 251 | 268 | 218 | 1,158 |
| Montgomery | 1487 | 1555 | 1687 | 1774 | 1425 | 7,928 |
| Waller | 98 | 99 | 132 | 156 | 113 | 598 |
| TOTAL | 18,292 | 19,290 | 20,161 | 21,449 | 16,855 | 96,047 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 6 | 1 | 7 | 4 | 4 | 22 |
| Chambers | 2 | 2 | 2 | 0 | 0 | 6 |
| Fort Bend | 3 | 1 | 2 | 3 | 2 | 11 |
| Galveston | 4 | 1 | 5 | 3 | 2 | 15 |
| Harris | 11 | 20 | 27 | 24 | 25 | 107 |
| Liberty | 0 | 4 | 3 | 3 | 2 | 12 |
| Montgomery | 6 | 1 | 5 | 6 | 6 | 24 |
| Waller | 0 | 4 | 1 | 0 | 3 | 8 |
| TOTAL | 32 | 34 | 52 | 43 | 44 | 205 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 12 | 7 | 14 | 8 | 7 | 48 |
| Chambers | 1 | 1 | 1 | 1 | 1 | 5 |
| Fort Bend | 10 | 11 | 18 | 8 | 11 | 58 |
| Galveston | 5 | 11 | 12 | 8 | 7 | 43 |
| Harris | 86 | 83 | 74 | 93 | 80 | 416 |
| Liberty | 2 | 3 | 2 | 5 | 3 | 15 |
| Montgomery | 14 | 18 | 16 | 22 | 15 | 85 |
| Waller | 6 | 0 | 2 | 3 | 1 | 12 |
| TOTAL | 136 | 134 | 139 | 148 | 125 | 682 |

## DISTRACTED DRIVING

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 1274 | 1295 | 1446 | 1643 | 1353 | 7,011 |
| Chambers | 138 | 106 | 110 | 158 | 142 | 654 |
| Fort Bend | 1373 | 1307 | 1238 | 1115 | 882 | 5,915 |
| Galveston | 2262 | 2165 | 1975 | 1924 | 1671 | 9,997 |
| Harris | 19413 | 17205 | 16104 | 15994 | 13351 | 82,067 |
| Liberty | 184 | 198 | 189 | 214 | 195 | 980 |
| Montgomery | 1753 | 1643 | 1632 | 1828 | 1668 | 8,524 |
| Waller | 198 | 173 | 242 | 285 | 216 | 1,114 |
| TOTAL | 26,595 | 24,092 | 22,936 | 23,161 | 19,478 | 116,262 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 1 | 4 | 4 | 3 | 1 | 13 |
| Chambers | 1 | 0 | 1 | 0 | 0 | 2 |
| Fort Bend | 0 | 1 | 1 | 0 | 1 | 3 |
| Galveston | 7 | 5 | 4 | 1 | 0 | 17 |
| Harris | 9 | 17 | 7 | 11 | 8 | 52 |
| Liberty | 4 | 2 | 3 | 2 | 0 | 11 |
| Montgomery | 2 | 1 | 2 | 2 | 1 | 8 |
| Waller | 0 | 3 | 0 | 0 | 0 | 3 |
| TOTAL | 24 | 33 | 22 | 19 | 11 | 109 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 24 | 17 | 19 | 19 | 25 | 104 |
| Chambers | 0 | 1 | 2 | 1 | 0 | 4 |
| Fort Bend | 25 | 14 | 14 | 12 | 9 | 74 |
| Galveston | 21 | 30 | 46 | 27 | 26 | 150 |
| Harris | 175 | 128 | 123 | 144 | 154 | 724 |
| Liberty | 3 | 6 | 3 | 5 | 9 | 26 |
| Montgomery | 14 | 17 | 16 | 21 | 13 | 81 |
| Waller | 4 | 4 | 3 | 2 | 10 | 23 |
| TOTAL | 266 | 217 | 226 | 231 | 246 | 1,186 |

## COMMERCIAL VEHICLES

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 240 | 264 | 295 | 334 | 261 | 1,394 |
| Chambers | 201 | 211 | 244 | 230 | 255 | 1,141 |
| Fort Bend | 526 | 567 | 566 | 574 | 461 | 2,694 |
| Galveston | 222 | 268 | 291 | 269 | 229 | 1,279 |
| Harris | 6,576 | 6,889 | 6,822 | 7,490 | 5,613 | 33,390 |
| Liberty | 109 | 119 | 132 | 151 | 142 | 653 |
| Montgomery | 670 | 652 | 656 | 719 | 562 | 3,259 |
| Waller | 108 | 102 | 141 | 196 | 144 | 691 |
| TOTAL | 8,652 | 9,072 | 9,147 | 9,963 | 7,667 | 44,501 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 2 | 5 | 5 | 3 | 2 | 17 |
| Chambers | 5 | 3 | 2 | 1 | 3 | 14 |
| Fort Bend | 7 | 1 | 5 | 1 | 2 | 16 |
| Galveston | 1 | 2 | 0 | 3 | 3 | 9 |
| Harris | 26 | 40 | 23 | 25 | 41 | 155 |
| Liberty | 5 | 8 | 5 | 5 | 1 | 24 |
| Montgomery | 12 | 4 | 5 | 3 | 6 | 30 |
| Waller | 0 | 4 | 5 | 2 | 5 | 16 |
| TOTAL | 58 | 67 | 50 | 43 | 63 | 281 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 14 | 13 | 11 | 9 | 13 | 60 |
| Chambers | 3 | 12 | 11 | 6 | 6 | 38 |
| Fort Bend | 9 | 11 | 12 | 8 | 10 | 50 |
| Galveston | 6 | 8 | 4 | 5 | 9 | 32 |
| Harris | 85 | 135 | 95 | 117 | 114 | 546 |
| Liberty | 6 | 9 | 9 | 13 | 6 | 43 |
| Montgomery | 28 | 24 | 12 | 22 | 28 | 114 |
| Waller | 5 | 7 | 3 | 13 | 11 | 39 |
| TOTAL | 156 | 219 | 157 | 193 | 197 | 922 |

## IMPAIRED DRIVING

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 357 | 295 | 365 | 349 | 379 | 1,745 |
| Chambers | 87 | 100 | 89 | 88 | 82 | 446 |
| Fort Bend | 325 | 349 | 341 | 333 | 320 | 1,668 |
| Galveston | 359 | 320 | 305 | 397 | 411 | 1,792 |
| Harris | 3,763 | 3,684 | 4,017 | 4,488 | 4,480 | 20,432 |
| Liberty | 71 | 80 | 67 | 81 | 56 | 355 |
| Montgomery | 623 | 603 | 537 | 575 | 481 | 2,819 |
| Waller | 70 | 60 | 64 | 59 | 58 | 311 |
| TOTAL | 5,655 | 5,491 | 5,785 | 6,370 | 6,267 | 29,568 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 16 | 23 | 9 | 16 | 10 | 74 |
| Chambers | 4 | 0 | 2 | 1 | 3 | 10 |
| Fort Bend | 7 | 7 | 9 | 13 | 5 | 41 |
| Galveston | 12 | 16 | 13 | 14 | 10 | 65 |
| Harris | 140 | 129 | 111 | 110 | 108 | 598 |
| Liberty | 1 | 7 | 3 | 3 | 5 | 19 |
| Montgomery | 25 | 24 | 19 | 17 | 14 | 99 |
| Waller | 1 | 3 | 5 | 3 | 2 | 14 |
| TOTAL | 206 | 209 | 171 | 177 | 157 | 920 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 26 | 21 | 26 | 19 | 26 | 118 |
| Chambers | 4 | 10 | 8 | 0 | 2 | 24 |
| Fort Bend | 12 | 12 | 13 | 19 | 23 | 79 |
| Galveston | 10 | 7 | 10 | 14 | 10 | 51 |
| Harris | 117 | 99 | 99 | 119 | 134 | 568 |
| Liberty | 8 | 9 | 3 | 7 | 5 | 32 |
| Montgomery | 35 | 44 | 28 | 18 | 27 | 152 |
| Waller | 7 | 5 | 3 | 2 | 9 | 26 |
| TOTAL | 219 | 207 | 190 | 198 | 236 | 1,050 |

## WORK ZONES

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 81 | 100 | 262 | 339 | 245 | 1,027 |
| Chambers | 33 | 73 | 134 | 175 | 314 | 729 |
| Fort Bend | 611 | 810 | 818 | 773 | 639 | 3,651 |
| Galveston | 71 | 260 | 408 | 545 | 860 | 2,144 |
| Harris | 3,161 | 3,305 | 3,557 | 3,067 | 2,097 | 15,187 |
| Liberty | 30 | 13 | 26 | 67 | 150 | 286 |
| Montgomery | 228 | 274 | 444 | 676 | 447 | 2,069 |
| Waller | 14 | 33 | 198 | 232 | 109 | 586 |
| TOTAL | 4,229 | 4,868 | 5,847 | 5,874 | 4,861 | 25,679 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 1 | 0 | 0 | 0 | 0 | 1 |
| Chambers | 0 | 0 | 0 | 3 | 0 | 3 |
| Fort Bend | 8 | 4 | 0 | 11 | 3 | 26 |
| Galveston | 0 | 4 | 4 | 1 | 7 | 16 |
| Harris | 10 | 16 | 17 | 8 | 9 | 60 |
| Liberty | 2 | 1 | 0 | 0 | 0 | 3 |
| Montgomery | 4 | 1 | 0 | 2 | 1 | 8 |
| Waller | 0 | 0 | 2 | 1 | 0 | 3 |
| TOTAL | 25 | 26 | 23 | 26 | 20 | 120 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 3 | 4 | 6 | 3 | 1 | 17 |
| Chambers | 0 | 8 | 9 | 5 | 3 | 25 |
| Fort Bend | 16 | 19 | 27 | 15 | 18 | 95 |
| Galveston | 3 | 4 | 6 | 13 | 10 | 36 |
| Harris | 50 | 67 | 54 | 54 | 44 | 269 |
| Liberty | 2 | 0 | 3 | 1 | 9 | 15 |
| Montgomery | 9 | 12 | 16 | 10 | 20 | 67 |
| Waller | 0 | 1 | 3 | 8 | 6 | 18 |
| TOTAL | 83 | 115 | 124 | 109 | 111 | 542 |

## PEDESTRIANS

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 46 | 47 | 47 | 58 | 46 | 244 |
| Chambers | 5 | 7 | 4 | 6 | 8 | 30 |
| Fort Bend | 73 | 90 | 82 | 99 | 73 | 417 |
| Galveston | 81 | 75 | 61 | 76 | 67 | 360 |
| Harris | 1697 | 1676 | 1680 | 1728 | 1370 | 8,151 |
| Liberty | 14 | 12 | 12 | 13 | 14 | 65 |
| Montgomery | 66 | 65 | 85 | 78 | 59 | 353 |
| Waller | 7 | 6 | 1 | 10 | 4 | 28 |
| TOTAL | 1,989 | 1,978 | 1,972 | 2,068 | 1,641 | 9,648 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 8 | 4 | 5 | 7 | 2 | 26 |
| Chambers | 3 | 1 | 0 | 0 | 2 | 6 |
| Fort Bend | 6 | 8 | 4 | 8 | 6 | 32 |
| Galveston | 13 | 6 | 8 | 9 | 6 | 42 |
| Harris | 133 | 115 | 103 | 124 | 134 | 609 |
| Liberty | 4 | 4 | 4 | 2 | 5 | 19 |
| Montgomery | 8 | 6 | 9 | 12 | 8 | 43 |
| Waller | 2 | 4 | 0 | 3 | 1 | 10 |
| TOTAL | 177 | 148 | 133 | 165 | 164 | 787 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 12 | 6 | 11 | 12 | 9 | 50 |
| Chambers | 0 | 3 | 2 | 3 | 3 | 11 |
| Fort Bend | 9 | 19 | 11 | 18 | 17 | 74 |
| Galveston | 17 | 19 | 6 | 21 | 11 | 74 |
| Harris | 254 | 217 | 271 | 326 | 271 | 1,339 |
| Liberty | 2 | 6 | 3 | 5 | 5 | 21 |
| Montgomery | 13 | 21 | 22 | 19 | 16 | 91 |
| Waller | 3 | 1 | 0 | 3 | 1 | 8 |
| TOTAL | 310 | 292 | 326 | 407 | 333 | 1,668 |

## BICYCLISTS

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 22 | 28 | 33 | 41 | 35 | 159 |
| Chambers | 1 | 1 | 3 | 2 | 4 | 11 |
| Fort Bend | 65 | 74 | 56 | 72 | 50 | 317 |
| Galveston | 83 | 81 | 68 | 68 | 55 | 355 |
| Harris | 667 | 645 | 597 | 621 | 545 | 3,075 |
| Liberty | 2 | 6 | 3 | 5 | 7 | 23 |
| Montgomery | 52 | 43 | 39 | 41 | 47 | 222 |
| Waller | 4 | 6 | 4 | 7 | 3 | 24 |
| TOTAL | 896 | 884 | 803 | 857 | 746 | 4,186 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 0 | 2 | 0 | 2 | 5 | 9 |
| Chambers | 0 | 0 | 1 | 0 | 0 | 1 |
| Fort Bend | 0 | 1 | 1 | 3 | 1 | 6 |
| Galveston | 2 | 1 | 3 | 2 | 3 | 11 |
| Harris | 12 | 14 | 13 | 19 | 21 | 79 |
| Liberty | 1 | 1 | 0 | 0 | 2 | 4 |
| Montgomery | 6 | 2 | 2 | 0 | 1 | 11 |
| Waller | 0 | 1 | 0 | 0 | 1 | 2 |
| TOTAL | 21 | 22 | 20 | 26 | 34 | 123 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 5 | 7 | 5 | 4 | 8 | 29 |
| Chambers | 0 | 0 | 0 | 1 | 2 | 3 |
| Fort Bend | 5 | 11 | 3 | 3 | 3 | 25 |
| Galveston | 11 | 6 | 6 | 4 | 9 | 36 |
| Harris | 74 | 59 | 64 | 70 | 54 | 321 |
| Liberty | 0 | 0 | 0 | 1 | 1 | 2 |
| Montgomery | 10 | 5 | 4 | 5 | 8 | 32 |
| Waller | 1 | 0 | 0 | 1 | 1 | 3 |
| TOTAL | 106 | 88 | 82 | 89 | 86 | 451 |

## MOTORCYCLIST

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 114 | 109 | 79 | 80 | 84 | 466 |
| Chambers | 24 | 18 | 16 | 16 | 15 | 89 |
| Fort Bend | 100 | 80 | 93 | 85 | 89 | 447 |
| Galveston | 160 | 171 | 173 | 146 | 131 | 781 |
| Harris | 1323 | 1270 | 1175 | 1126 | 1162 | 6,056 |
| Liberty | 29 | 29 | 38 | 29 | 32 | 157 |
| Montgomery | 167 | 189 | 151 | 159 | 152 | 818 |
| Waller | 24 | 29 | 19 | 25 | 27 | 124 |
| TOTAL | 1,941 | 1,895 | 1,744 | 1,666 | 1,692 | 8,938 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 7 | 11 | 3 | 2 | 6 | 29 |
| Chambers | 1 | 0 | 2 | 0 | 2 | 5 |
| Fort Bend | 4 | 6 | 5 | 6 | 1 | 22 |
| Galveston | 11 | 12 | 12 | 9 | 5 | 49 |
| Harris | 72 | 76 | 50 | 60 | 65 | 323 |
| Liberty | 2 | 7 | 1 | 4 | 1 | 15 |
| Montgomery | 17 | 12 | 6 | 10 | 10 | 55 |
| Waller | 2 | 3 | 1 | 1 | 2 | 9 |
| TOTAL | 116 | 127 | 80 | 92 | 92 | 507 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 30 | 24 | 28 | 19 | 23 | 124 |
| Chambers | 7 | 5 | 5 | 7 | 2 | 26 |
| Fort Bend | 19 | 18 | 21 | 19 | 25 | 102 |
| Galveston | 25 | 39 | 38 | 27 | 30 | 159 |
| Harris | 225 | 234 | 250 | 218 | 246 | 1,173 |
| Liberty | 7 | 6 | 6 | 10 | 8 | 37 |
| Montgomery | 41 | 67 | 37 | 41 | 38 | 224 |
| Waller | 7 | 6 | 6 | 6 | 9 | 34 |
| TOTAL | 361 | 399 | 391 | 347 | 381 | 1,879 |

## RAILROAD CRASHES

Railroad-related
Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 19 | 17 | 26 | 33 | 20 | 115 |
| Chambers | 7 | 3 | 6 | 5 | 5 | 26 |
| Fort Bend | 35 | 30 | 37 | 30 | 22 | 154 |
| Galveston | 14 | 20 | 20 | 29 | 18 | 101 |
| Harris | 274 | 249 | 259 | 326 | 242 | 1,350 |
| Liberty | 8 | 12 | 17 | 25 | 10 | 72 |
| Montgomery | 40 | 33 | 35 | 41 | 41 | 190 |
| Waller | 6 | 0 | 2 | 4 | 4 | 16 |
| TOTAL | 403 | 364 | 402 | 493 | 362 | 2,024 |

Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 1 | 0 | 0 | 0 | 0 | 1 |
| Chambers | 0 | 0 | 0 | 0 | 0 | 0 |
| Fort Bend | 1 | 0 | 0 | 1 | 0 | 2 |
| Galveston | 0 | 0 | 0 | 1 | 0 | 1 |
| Harris | 0 | 3 | 0 | 2 | 1 | 6 |
| Liberty | 0 | 0 | 0 | 0 | 0 | 0 |
| Montgomery | 0 | 0 | 0 | 0 | 0 | 0 |
| Waller | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 2 | 3 | 0 | 4 | 1 | 10 |

Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 0 | 0 | 1 | 0 | 1 | 2 |
| Chambers | 0 | 0 | 1 | 0 | 0 | 1 |
| Fort Bend | 1 | 3 | 4 | 0 | 1 | 9 |
| Galveston | 3 | 1 | 1 | 4 | 0 | 9 |
| Harris | 7 | 11 | 5 | 8 | 9 | 40 |
| Liberty | 1 | 0 | 0 | 0 | 2 | 3 |
| Montgomery | 0 | 0 | 0 | 0 | 0 | 0 |
| Waller | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 12 | 15 | 12 | 12 | 13 | 64 |

## AT-GRADE CROSSING

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 2 | 5 | 2 | 5 | 3 | 17 |
| Chambers | 0 | 0 | 2 | 0 | 0 | 2 |
| Fort Bend | 9 | 4 | 9 | 7 | 3 | 32 |
| Galveston | 2 | 2 | 3 | 1 | 0 | 8 |
| Harris | 30 | 33 | 39 | 37 | 26 | 165 |
| Liberty | 2 | 3 | 1 | 4 | 0 | 10 |
| Montgomery | 1 | 0 | 1 | 3 | 6 | 11 |
| Waller | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 46 | 47 | 57 | 57 | 38 | 245 |

### Fatalities†

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 0 | 0 | 0 | 2 | 0 | 2 |
| Chambers | 0 | 0 | 0 | 0 | 0 | 0 |
| Fort Bend | 1 | 0 | 0 | 1 | 0 | 2 |
| Galveston | 0 | 0 | 0 | 0 | 0 | 0 |
| Harris | 1 | 2 | 0 | 1 | 2 | 6 |
| Liberty | 0 | 0 | 0 | 0 | 0 | 0 |
| Montgomery | 0 | 0 | 0 | 1 | 0 | 1 |
| Waller | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 2 | 2 | 0 | 5 | 2 | 11 |

†*Includes RR workers and Train Passengers*

### Serious Injuries†

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 0 | 2 | 1 | 0 | 0 | 3 |
| Chambers | 0 | 0 | 1 | 0 | 0 | 1 |
| Fort Bend | 3 | 0 | 9 | 0 | 0 | 12 |
| Galveston | 3 | 2 | 1 | 1 | 0 | 7 |
| Harris | 8 | 14 | 14 | 10 | 9 | 55 |
| Liberty | 2 | 1 | 0 | 25 | 0 | 28 |
| Montgomery | 0 | 0 | 0 | 1 | 1 | 2 |
| Waller | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 16 | 19 | 26 | 37 | 10 | 108 |

†*Includes RR workers, and Train Passengers*

## INTERSECTION-RELATED CRASHES

### Crashes

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 2,489 | 2,450 | 2,539 | 2,764 | 2,334 | 12,576 |
| Chambers | 354 | 327 | 329 | 396 | 321 | 1,727 |
| Fort Bend | 4,900 | 4,632 | 4,594 | 4,819 | 3,985 | 22,930 |
| Galveston | 3,518 | 3,373 | 3,327 | 3,354 | 2,992 | 16,564 |
| Harris | 48,923 | 43,273 | 42,934 | 44,459 | 38,078 | 217,667 |
| Liberty | 511 | 542 | 540 | 597 | 533 | 2,723 |
| Montgomery | 3,803 | 3,569 | 3,651 | 3,775 | 3,415 | 18,213 |
| Waller | 265 | 248 | 281 | 337 | 279 | 1,410 |
| TOTAL | 64,763 | 58,414 | 58,195 | 60,501 | 51,937 | 293,810 |

### Fatalities

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 11 | 9 | 11 | 15 | 11 | 57 |
| Chambers | 2 | 2 | 2 | 2 | 0 | 8 |
| Fort Bend | 14 | 14 | 10 | 14 | 6 | 58 |
| Galveston | 6 | 9 | 8 | 12 | 16 | 51 |
| Harris | 108 | 114 | 112 | 119 | 141 | 594 |
| Liberty | 6 | 7 | 3 | 3 | 4 | 23 |
| Montgomery | 10 | 8 | 8 | 7 | 9 | 42 |
| Waller | 2 | 6 | 0 | 1 | 6 | 15 |
| TOTAL | 159 | 169 | 154 | 173 | 193 | 848 |

### Serious Injuries

| COUNTY | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|
| Brazoria | 75 | 51 | 72 | 72 | 78 | 348 |
| Chambers | 8 | 9 | 13 | 7 | 6 | 43 |
| Fort Bend | 87 | 85 | 94 | 77 | 92 | 435 |
| Galveston | 62 | 82 | 62 | 75 | 66 | 347 |
| Harris | 991 | 899 | 780 | 896 | 904 | 4,470 |
| Liberty | 29 | 23 | 14 | 21 | 14 | 101 |
| Montgomery | 99 | 93 | 84 | 71 | 68 | 415 |
| Waller | 12 | 9 | 2 | 10 | 12 | 45 |
| TOTAL | 1,363 | 1,251 | 1,121 | 1,229 | 1,240 | 6,204 |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