



**SOUTH ORANGE VILLAGE  
POLICE DEPARTMENT**

201 South Orange Avenue  
South Orange  
New Jersey 07079  
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**To:** Acting Chief Dolinac  
**From:** Lt. A. Acevedo – Traffic Bureau  
**Date:** February 15, 2021  
**Subject:** 2021 Motor Vehicle Crash Report

Sir,

This annual crash analysis has three main purposes:

- Identify areas in the Village where there is a high volume of motor vehicle crashes
- Identify the contributing circumstances of those crashes
- Develop solutions to mitigate and minimize future crashes

**2021 Motor Vehicle Crash Overview:**

- During 2021, there were 416 motor vehicle crashes in the Township of South Orange Village. An increase of 16% from the 2020 total of 349
- 1 bicycle crash, a decrease of 75% from the 2020 total of 4
- 16 pedestrian involved crashes, an increase of 6.25% over the 2020 total of 15
- 112 involving parked vehicles, an increase of 20% over the 2020 total of 93
- 56 reported hit and run crashes, an increase of 16.5% over the 2020 total of 47
- 1 crash involving an emergency vehicle en-route to a call for service (Emergency vehicle from Millburn traveling through South Orange)
- **93.5% of all motor vehicle crashes resulted in no reported injuries (defined as requiring transportation to a medical care facility from the scene of the crash)**
- **0 Fatalities (down from 3 in 2020)**
- Tuesdays and Wednesdays are split evenly with regard to *crash breakdown by day of week*. Both days with 17.14% of total crashes (each).



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- *Crash break down by time of day* is also split evenly. Crash occurrences peak at both 12:00pm and 3:00pm.
- A majority of crashes involve low-speed driving where vehicles were parked, parking, stopped in traffic, or backing. Low speed is defined at 25mph or less.

*\*See Appendix A for enumerated local data*

**Roads with the highest occurrences of motor vehicle crashes (in rank order):**

- County Highway 510 (South Orange Ave from Newark line to Maplewood line)
- County Highway 638 (Scotland Rd/Valley Street corridor)
- County Highway 665 (Irvington Ave)

For these county roads, the following were contributing circumstances for pedestrian related crash events

- Low light conditions
- Dark clothing
- Pedestrians crossing outside of a crosswalk (e.g. – mid-block instead of at a corner, in between parked vehicle,
- Crossing without giving due attention to roadway and traffic conditions (other distractors may factor into this circumstance)

During the reporting period, major improvements were made to Scotland Road, and some of the safety features include:

- Rumble strips
- Speed tables
- New signage
- Improved lighting



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Additionally, proper distances and sightlines continue to be addressed along Valley Street, in particular where crosswalks are positioned.

In other areas of town an overwhelming majority of crashes, historically, have been attributed to traffic volume. For example, Valley Street, which has our second highest crash count, is traversed by an average of 9000 vehicles per day.

Since the completion of the 2020 report, we have seen approximately a 16% increase in overall crashes, which seem to be in line with the current national trend. In New Jersey alone, fatal crashes have risen nearly 18% from 2020 to 2021 (see Appendix C).

From the beginning of Covid 19 pandemic in early 2020 there have been fewer vehicles on the roadway overall, however even with 2021 seeing more drivers getting back into their cars, we have not returned to pre-pandemic traffic volumes.

One factor that may be attributed to an increase of crashes may be faster moving vehicles on account of less traffic (less overall vehicles on the road). Another factor may be that there is less enforcement, or even the perception of less enforcement.

For this agency, 2021 presented both staffing and equipment challenges that restricted our ability to conduct traffic enforcement details at pre-pandemic frequencies. Such details must be conducted in accordance with state guidelines and department policy in order to be safe for both the public and the officers.



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**Fatal Crashes, Pedestrian Crashes, and Bicycles Crashes:**

**Fatal Crashes:**

In 2021, there were zero fatal motor vehicle crashes in South Orange. There were 3 fatal crashes in 2020. This is a significant reduction particularly in light of the overall national and statewide increase in fatal crashes, even into the first months of 2022 (Appendices B, C, and D).

**Bicycle vs. Motor Vehicle Crashes:**

In 2021, we had 1 crash involving a bicycle (down from 4 in 2020). This particular incident did not occur at any of our *hot spots* for motor vehicle incidents. The cyclist did not sustain any injuries. The cause of the crash was attributed to the cyclist moving through a controlled intersection, without stopping, while a vehicle traveled on the intersecting road.

There is no detected *problem area* for vehicle vs. bicycle crashes.

**Pedestrian vs. Motor Vehicle Crashes:**

In 2021, there were 16 motor vehicle crashes involving pedestrians. (up from 13 in 2020). Characteristics of these 16 incidents:

- 9 resulted in the report of an injury, 7 of these were reported as minor injuries.
- 2 of these injuries were reported as moderate.
- 6 were caused by pedestrian actions.
- 1 involved a hit and run
- 2 involving vehicles reversing
- 9 involving vehicle making left turns
- 3 incidents occurring during low light conditions or where pedestrians wore dark clothing.



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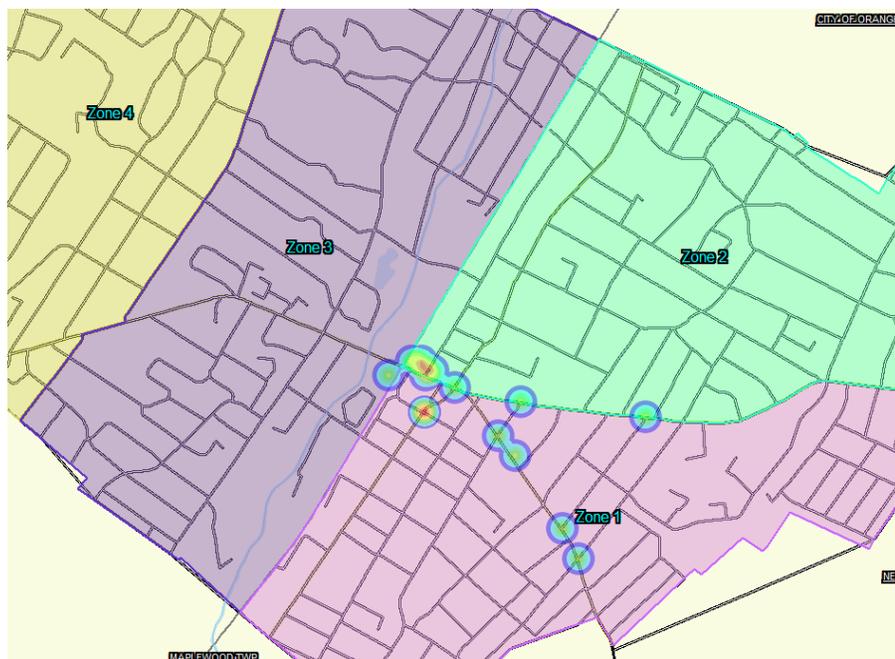
Of these 17 pedestrian involved crashes, 4 occurred in areas we identify as *hot spots*.

- 2 at the intersection of Valley Street and First Street
- 2 at the intersection of Prospect Street and Irvington Ave

Of these 4 incidents, one resulted in moderate injury (First St & Valley St). The cause of this crash was due in part by an illegally parked box-truck, obstructing the sight line to the crosswalk. The parked vehicle, as well as the driver of the vehicle directly involved in the crash were issued summonses.

The majority of the other pedestrian related incidents occurred on two of our three busiest corridors, South Orange Ave and Irvington Ave.

## 2021 Motor Vehicle Pedestrian Crash Heat Map

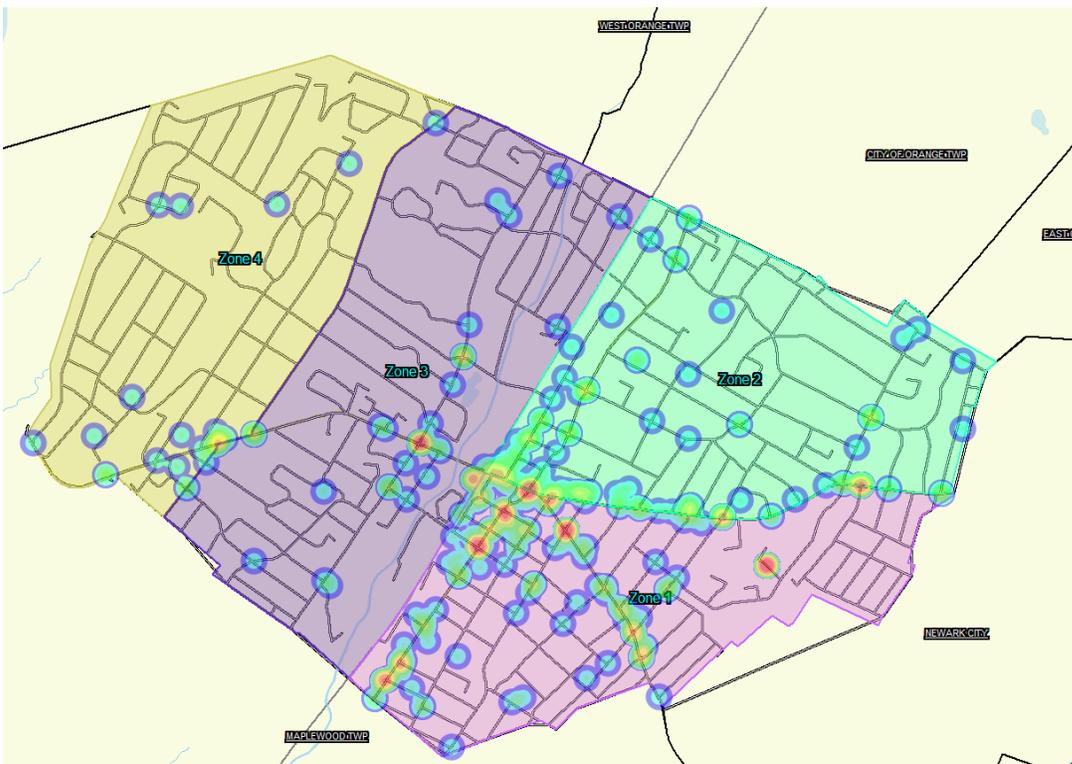




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# 2021 Motor Vehicle Crash Heat Map





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Proposed Countermeasures/Actions to Pedestrian and Cyclist Crashes:

- Increase public education campaigns on pedestrian safety
- Enforce pedestrian unsafe actions such as jay walking and crossing against illuminated signage.
- Increase the Township's presence and outreach on social media by using Bike Safety Messages provided from [www.bestreetsmartnj.com](http://www.bestreetsmartnj.com).
- Participate in NJ Highway Traffic Safety's Bicycle Safety Month in May. While pushing NJHTS's social media message of "Share the Road with Bicyclists"
- Assist schools in organizing and participating in NJHTS's "Bike To School Day on May 4<sup>th</sup>
- Recurring education and training for officers on existing Motor Vehicle Laws concerning bicycles, skateboards and scooter as well as the Township's mandatory Helmet Ordinance.



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**Other Areas with High Volume of Crashes:**

**Valley St/Scotland Road Corridor:**



**Description:**

Valley St and Scotland Rd (County Highway 638) is a roadway that travels north and south from Randolph Place (Orange border) to Hixon Pl (Maplewood border) at the Maplewood Line. All intersecting streets are controlled by Stop Signs except Third St, Montrose Ave, and South Orange Ave, which are controlled by Traffic Signals. It is one lane in each direction for most of its length and has speed limits of 25mph on Valley St and 25mph on Scotland Rd.

**The entire corridor experienced 55 motor vehicle crashes during 2021 year. For 2021, Scotland Road experienced 13 crashes, the same number as it did in 2020. On Valley Street, the total number of crashes increased by 7, from 35 in 2020 to 42 in 2021.**



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The section of the roadway between South Orange Ave & Third St continues to be of particular concern. The area of Valley Street and First St is most problematic.

Proposed Countermeasures/Actions:

- Increase police presence, when possible, by continuing using NJHTS's "Cops in the Crosswalk" enforcement program.
- Continue the Street Smart NJ public education campaign coordinated by the North Jersey Transportation Planning Authority that is aimed to raise awareness of pedestrian and motorist laws
- Determine feasibility of installing flood lights either on a pole or nearby building to improve pedestrian/intersection visibility as intersection along this stretch of roadway are very dark at night.
- Improve line striping to delineate lane of travel and crosswalks.
- Remove parking spaces that obscure driver or pedestrian vantage points or otherwise impact line of sight. This has already been accomplished in the area of First Street and Valley St, Roland Ave and Valley Street and soon in the area of Hixon Place.





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**South Orange Ave & Center St/Turrell Ave:**



**Description:**

The intersection of the three roadways is “star shaped”. The four approaches of South Orange Ave & Centre St are controlled by red light traffic signals with advanced left turn and pedestrian countdown indicators. Turrell Ave intersects South Orange Ave where Turrell Ave is divided by a concrete island and controlled by a stop sign and crosswalk. South Orange Ave is a county road that has two lanes in each direction (east/west) at this location and speed limit of 35mph. Centre St is a municipal road that runs north/south with one lane in each direction and a speed limit of 25 mph. Turrell Ave is a



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municipal road that is primarily residential with one lane in each direction and a speed limit of 25 mph.

**There were 6 crashes at these locations in 2021, twice as many as 2020 which had 3. A review of each crash revealed the following:**

- **2 crashes occurred during low speed, left hand turns.**
- **1 crash occurred during a low speed lane change.**
- **3 crashes were caused by drivers engaged in illegal activity or other motor vehicle violations**
  - **1 single vehicle crash at 2:20am, stolen vehicle where driver fled scene**
  - **1 single vehicle crash at 4:40am where driver lost control of car at high speed, driver was issued multiple summonses.**
  - **1 Single vehicle crash at 7:15am, driver at high rate of speed crashed and overturned vehicle. One occupant fled on foot, one occupant was injured. After an investigation, the driver was charged with two counts of Aggravated Assault by Vehicle as well as numerous motor vehicle summonses.**

Countermeasures/Actions:

- Increase police presence and enforcement efforts specifically focusing on Failure to Yield to Pedestrian Violations and generally all Title 39 violations at the intersection.
- Work with Seton Hall University Property Maintenance Department to ensure line of sight issues are addressed on their properties to ensure a safer intersection.
- Connecting Seton Hall University and Street Smart NJ to develop a social media campaign for commuter students.
- In 2020, traffic lights were reprogrammed by Essex County traffic engineers to hold all lights in all directions for pedestrian crossings. This is known as LPI, Leading Pedestrian Intervals at signalized

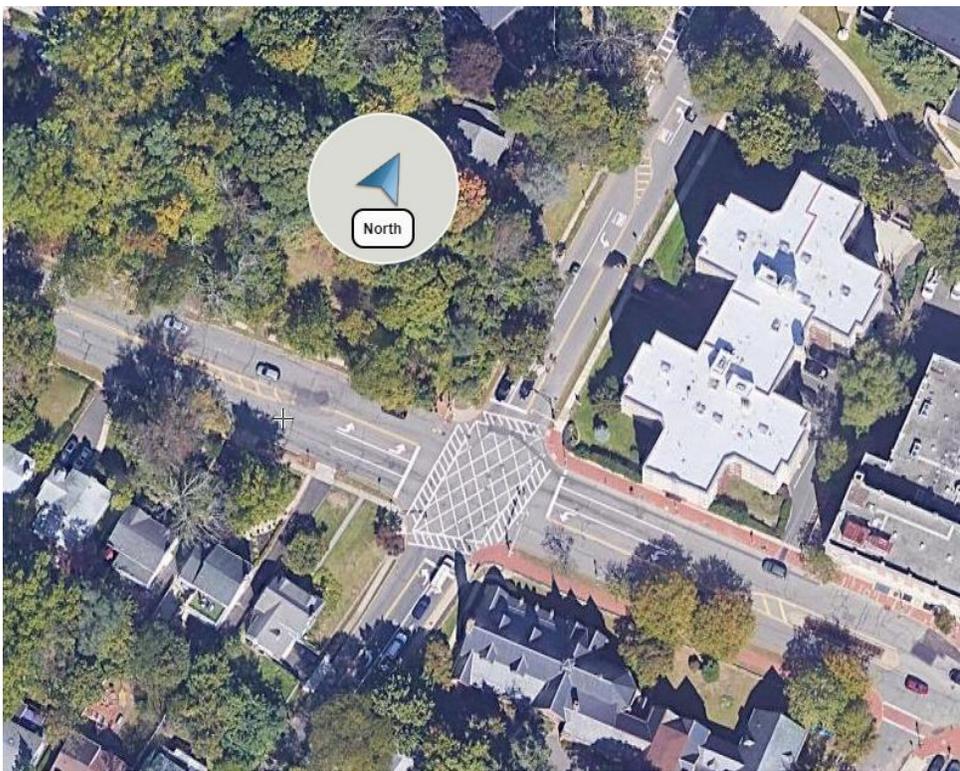


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intersections allow pedestrians to walk, usually 3 to 4 seconds, before vehicles get a green signal. LPI increases visibility, reduces conflicts and improves yielding to pedestrians

**West South Orange Ave & Ridgewood Rd:**



**Description:**

The four approaches of West South Orange Ave & Ridgewood Rd. are controlled by red light traffic signals with advanced left turn and pedestrian countdown indicators. West South Orange Ave is a county road that runs east/west, has 2 lanes in each direction, and has a speed limit of 35mph. Ridgewood Rd. runs north/south with one lane in each direction from Maplewood to West Orange and has a 25mph speed limit.



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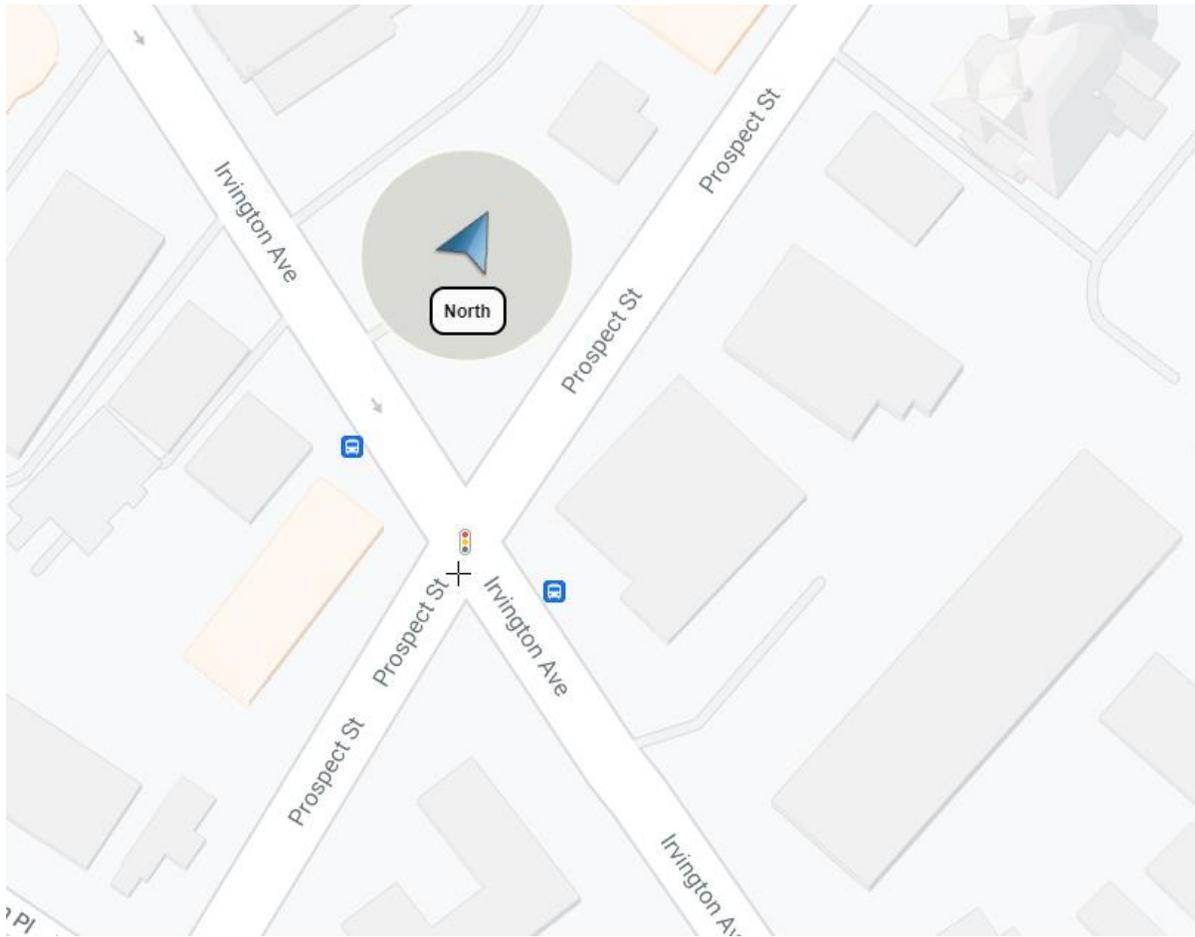
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During 2021, there were 7 crashes at this intersection, 4 more than in 2020, which had 3 crashes.

Countermeasures/Actions:

- Continue to monitor the intersection and crashes to identify future concerns.

Irvington Ave & Prospect St.:





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Satellite image unavailable due to tree cover

### Description:

The four approaches of Irvington Ave & Prospect St. are controlled by red light traffic signals with pedestrian countdown indicators. Irvington Ave runs east/west from Scotland Rd to Newark with one lane in each direction and a 25mph speed limit. Prospect St runs north/south with one lane in each direction from South Orange Ave to Maplewood with a 25mph speed limit.

The Irvington Ave Corridor has experienced 31 crashes along its length during 2021, an increase of 6 from the 2020 total of 25. Of our county roads, the Irvington Ave Corridor has third highest crash rate in the Township.

The intersection along Irvington Ave with the highest number of crashes is at Prospect St with 8 (7 in 2020). Of these 8 crashes, most were at low speeds, and 3 resulted in minor injury. 1 of these 8 crashes was a pedestrian struck, by a left turning vehicle.

### Countermeasures/Actions:

- Continue to work with township and county engineers in addressing sightline issues and pedestrian crosswalks.
- Increase police presence, when possible, to enforce the “No Stopping/No Standing” Ordinance which is supported by yellow roadway markings.
- Determine feasibility of installing additional lighting at intersection
- Partner with NJHTS and participate in their May Motorcycle Safety Awareness Campaign



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- Essex County made some improvements to crosswalks, sidewalks and curbs on Irvington Ave in 2021.
- Additional grant funded improvements, secured by The Village of South Orange, are planned.

### Sloan St Corridor:



### Parking Detail



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### Description:

Sloan St is a municipal two lane roadway that travels north/south from South Orange Ave to Third Street with one lane in each direction and a speed limit of 25mph. There is a mid-block crossing between South Orange Ave and First Street and all other intersections have crosswalks. There is a roundabout where Sloan St meets First St. Additionally, the roadway has numerous signs prohibiting certain actions by motorists within this corridor.

During 2021, there were 14 motor vehicle crashes along Sloan Street, double that of 2020 total of 7. Sloan Street, particularly between South Orange Ave and First Street is one of our busiest roads when factoring in commuters and retail patrons. All of the 15 incidents were low speed with a majority being caused by drivers backing out of or pulling into a parking space. One of the 15 incidents was reported as a pedestrian struck. Upon review, the crash was a single vehicle incident where the driver failed to put vehicle into park. Upon exiting, the car rolled and knocked the driver to the ground. Of the 15 Sloan Street incidents, none resulted in reported injury.

### Countermeasures/Actions:

- Continue police presence and enforcement efforts
- Sloan Street remains one of our top streets for the issuing of summonses, a majority of which are for violating the No Left Turn local ordinance. These are followed closely by summonses for Parked in Loading Zone, Handicapped and then various moving violations.
- Work with the Engineering Department as well as the Parking Authority to create solutions to possibly ease congestion.
- Some potential engineering solutions are:
  - Changing angled parking to parallel to the curb parking



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- Widening the corridor
- Widen the angled spots
- All of these will result in loss of parking spaces but would improve sightlines.

### Ward PI & Wilden PI:



### Description:

Ward PI and Wilden PI is a municipal intersection where north/south bound Ward PI traffic meets east/west bound Wilden PI Traffic. Both roads have one lane in each direction and a 25mph speed limit. Wilden PI is controlled by a Stop Sign. Ward PI is heavily traveled with Seton Hall University Drivers as well as others who use the road as a “cut through” from Irvington Ave to South Orange Ave. Average daily total of vehicles passing through this area, is 4,055. (traffic survey conducted in September of 2021).



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During 2021, there were a total of 10 crashes on Ward Place with 1 crash at this intersection. This is a reduction from 2020 where that same stretch of road experienced a reported 12 crashes, 2 of which were at Wilden Pl/Ward Pl.

Countermeasures/Actions:

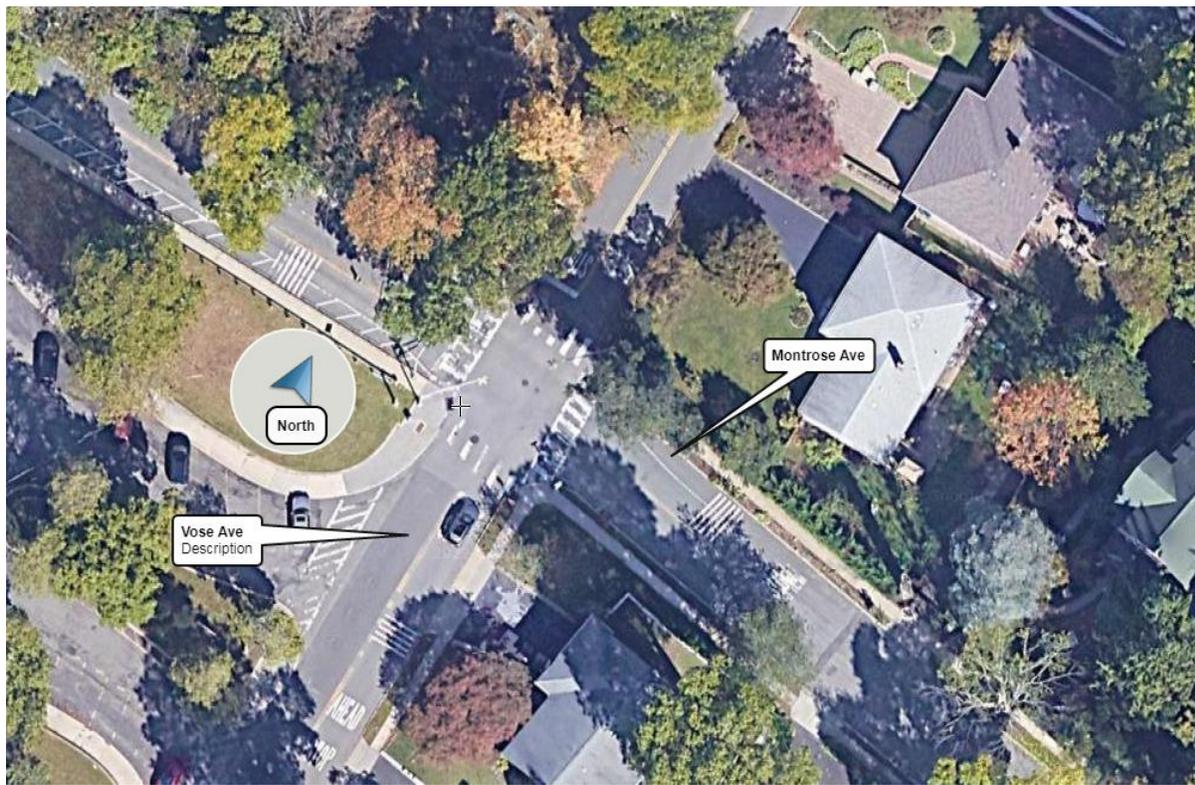
- In 2020, The Township of South Orange Village addressed sightline issues by expanding no parking areas, repainting yellow curbing, eliminating some parking spaces and installing new signs. This resulted in a decrease of crashes on Ward Place, specifically in the area of Wilden Place.
- Continue to monitor the intersection and crashes to identify future concerns.
- Update the town on faded road striping and markings.



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**Montrose Ave & Vose Ave:**



**Description:**

Montrose Ave & Vose Ave is a municipal intersection where east/west bound Montrose Ave traffic is controlled by two overhead, flashing, amber-colored lights. North/south bound Vose Ave traffic is controlled by two overhead, flashing red lights and two retro-reflective Stop Signs in each direction. Both roads have one lane in each direction and have a 25mph speed limit.



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During 2020, there was 1 crash at the intersection, a reduction from the 2 crashes that occurred in 2020. For this incident, no injuries were reported.

Countermeasures/Actions:

- Reduce potential speeding over the West Montrose Ave train bridge by installing a permanent, flashing speed display sign. (such as the one installed on Prospect Street in 2020)
- Increase police presence while enforcing Failure to Yield to Pedestrians in Crosswalk violation and Stop Sign violations.
- Install advanced warning, Pedestrian Crossing Ahead signs to the east & west of the intersection.
- Install solar powered, flashing, Stop signs on the north & south side of the intersection (e.g. – similar sign was installed So. Wyoming Ave & Lenox Ave after a fatal vehicle crash occurred at that location).
- Continue to work with DPW for the pruning of trees which may cause sightline issues or block posted signage.



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**Summary:**

The purpose of the analysis is to continue the assessment of road safety conditions along the highways and at intersections in South Orange with the objective of reducing the volume and severity of roadway crashes. Emphasis has been placed on improving road safety through targeted road safety Engineering, Educational/Behavioral and Enforcement programs.

**Education:**

- The primary function of this category is educate the public about traffic safety and to convince the public to change their driving behaviors in a way that leads to greater safety on the roads.
- Current means of providing traffic safety education include:
  - Social media channels
  - Township website
  - Traffic stops where officers use discretion and opt to educate drivers rather than issue summonses
  - Public safety meetings
  - Direct engagement with members of the public, such as neighborhood organization meetings
- Priority areas to be supported included:
  - Distracted driving
  - Seat belt usage
  - Child passenger safety
  - Pedestrian safety
  - Bicycle safety



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- Distracted driving
- Aggressive driving
- Impaired driving
- Motorcycle safety

### Engineering:

- There continues to be a need for a Civil or Traffic Engineer dedicated to monitoring Township and County Highway operations, to recommend improvements in the highway system and improve the safety for vehicle operators, pedestrians and bicyclists.
- South Orange streets and highways are expected to safely and efficiently move hundreds of thousands of vehicles each year.
- Many problems can be associated with this network.
  - The growing and shifting population may cause some routes to become inadequate
  - Increasing maintenance and equipment costs
  - Growing population causes drastic alterations in traffic flow patterns.
  - Damage from weather events, such as Tropical Storm Ida
- Responsibility for the design, construction and maintenance of the highway system falls on the engineering and public works departments, at the county and local levels of government.
- The Police Department can support the work of the Engineering Department through continued use of traffic measurement devices to collect/supply data on vehicle volume, speed, and other dynamics for the cars that travel on our roadways.



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*Enforcement:*

- The South Orange Police Department will continue its efforts to address the most prevalent causation factors for pedestrians and vehicle crashes. Our commitment is to the safe passage of all roadway users in the township as we move towards fewer crashes and zero fatalities.
- To achieve this goal, we will continue to work with our traffic safety partners from US/NJ Highway Traffic Safety Administrations, AAA, NJ Department of Transportation, NJ State Police, NJ Motor Vehicle Commission, and the Essex County Traffic Officers' Association and participate in their traffic safety enforcement programs The areas of concentration include:
  - Utilize the Vision Zero network resources to research other communities' successes in crash reduction
  - Pedestrian Decoy programs/Cops in Crosswalk program
  - Share the Road with Motorcycles and Bicycles
  - Hang Up! Just Drive; distracted driving program
  - Bi-annual Click It or Ticket; occupant protection campaign
  - Bi-annual Drive Sober or get Pulled Over; impaired driving campaign
  - Obey the Sign or Pay the Fine; aggressive driving campaign

Through the above multi-pronged approach, SOPD will continue to work toward reducing crash related injuries and fatalities; with the goal to increase community awareness and understanding of traffic safety, and causing a shift in community attitudes toward a safe behavior on the roads.



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**Appendix A**

	2021	2020	Change Count	Change Percent
Total Crashes	416	349	+67	16% increase
Fatal Crashes	0	3	-3	300% decrease
Pedestrian Crashes	16	15	+1	6.25% increase
Parked Vehicles	112	93	+19	20% increase
Hit & Run	56	47	+9	16.5% increase
Bicycle	1	4	-3	75% decrease

**Appendix B**

Publication, “Traffic Safety Facts, Crash Stats” – U.S. Dept. of Transportation, National Highway Traffic Safety Administration, (5) page report, February 2022



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<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813240>



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Administration**

**TRAFFIC SAFETY FACTS**  
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A Brief Statistical Summary

February 2022

# Early Estimate of Motor Vehicle Traffic Fatalities for the First 9 Months (January–September) of 2021

## Summary

A statistical projection of traffic fatalities for the first 9 months of 2021 shows that an estimated 31,720 people died in motor vehicle traffic crashes nationwide. This represents an increase of about 12.0 percent as compared to 28,325 fatalities that were projected in the first 9 months of 2020, as shown in Table 1. This also represents the highest number of fatalities during the first 9 months of the year since 2006 and the highest percentage increase during the first 9 months in the recorded history of data in the Fatality Analysis Reporting System (FARS). Preliminary data reported by the Federal Highway Administration (FHWA) show that vehicle miles traveled (VMT) in the first 9 months of 2021 increased by about 244.0 billion miles, or about a 11.7-percent increase as compared to the first 9 months of 2020. Also shown in Table 1 are the fatality rates per 100 million VMT, by quarter. The fatality rate for the first 9 months of 2021 increased to 1.36 fatalities per 100 million VMT, margin-

ally up from the projected rate of 1.35 fatalities per 100 million VMT in the first 9 months of 2020. The fatality rate in Q2 and Q3 declined, which represents the second consecutive decline in year-to-year quarterly fatality rate since Q4 of 2019. For the NHTSA Region differences, 9 of the 10 Regions are estimated to have increases in fatalities, and 5 of the 10 Regions are estimated to have increases in the fatality rate per 100 million VMT in the first 9 months of 2021 as compared to the corresponding 9 months of 2020. Also, most States experienced increases. The actual counts for 2020 and 2021 and the ensuing percentage changes from 2020 to 2021 will be further revised as the FARS annual report and final files for 2020, and the annual report file for 2021 are available next year. These estimates may be further refined when the projections for the whole of 2021 are released in late April 2022.

**Table 1: Fatalities and Fatality Rate by Quarter, First 9 Months, Full Year, and the Percentage Change From the Corresponding Quarter, First 9 Months or Full Year in the Previous Year**

Year	1st Quarter (Jan–Mar)	2nd Quarter (Apr–Jun)	3rd Quarter (Jul–Sep)	4th Quarter (Oct–Dec)	Total (Full Year)	1st 9 Months (Jan–Sep)
<b>Fatalities and Percentage Change in Fatalities for the Corresponding Quarter, 1st 9 Months, and Total From the Previous Year</b>						
2011	6,726 [-0.4%]	8,227 [-3.5%]	8,984 [-2.6%]	8,542 [+0.5%]	32,479 [-1.6%]	23,937 [-2.3%]
2012	7,521 [+11.8%]	8,612 [+4.7%]	9,171 [+2.1%]	8,478 [-0.7%]	33,782 [+4.0%]	25,304 [+5.7%]
2013	7,166 [-4.7%]	8,207 [-4.7%]	9,024 [-1.6%]	8,496 [+0.2%]	32,893 [-2.6%]	24,397 [-3.6%]
2014	6,856 [-4.3%]	8,179 [-0.3%]	8,799 [-2.5%]	8,910 [+4.9%]	32,744 [-0.5%]	23,834 [-2.3%]
2015	7,370 [+7.5%]	8,823 [+7.9%]	9,805 [+11.4%]	9,486 [+6.5%]	35,484 [+8.4%]	25,998 [+9.1%]
2016	8,154 [+10.6%]	9,563 [+8.4%]	10,078 [+2.8%]	10,011 [+5.5%]	37,806 [+6.5%]	27,795 [+6.9%]
2017	8,301 [+1.8%]	9,460 [-1.1%]	10,081 [+0.0%]	9,631 [-3.8%]	37,473 [-0.9%]	27,842 [+0.2%]
2018	8,203 [-1.2%]	9,323 [-1.4%]	9,934 [-1.5%]	9,375 [-2.7%]	36,835 [-1.7%]	27,460 [-1.4%]
2019	7,816 [-4.7%]	9,172 [-1.6%]	9,953 [+0.2%]	9,155 [-2.3%]	36,096 [-2.0%]	26,941 [-1.9%]
2020 <sup>†</sup>	7,900 [+1.1%]	9,120 [-0.6%]	11,305 [+13.6%]	10,355 [+13.1%]	38,680 [+7.2%]	28,325 [+5.1%]
2021 <sup>†</sup>	8,905 [+12.7%]	11,065 [+21.3%]	11,750 [+3.9%]	—	—	31,720 [+12.0%]
<b>Fatality Rate per 100 Million Vehicle Miles Traveled (VMT)</b>						
2011	0.98	1.09	1.18	1.17	1.10	1.09
2012	1.08	1.12	1.21	1.16	1.14	1.14
2013	1.04	1.07	1.17	1.16	1.10	1.09
2014	0.99	1.03	1.11	1.17	1.08	1.05
2015	1.03	1.08	1.20	1.21	1.15	1.11
2016	1.11	1.16	1.23	1.27	1.19	1.17
2017	1.12	1.13	1.21	1.20	1.17	1.16
2018	1.10	1.11	1.18	1.15	1.14	1.13
2019	1.04	1.08	1.17	1.12	1.11	1.10
2020 <sup>†</sup>	1.12	1.46	1.49	1.41	1.37	1.35
2021 <sup>†</sup>	1.29	1.36	1.41	—	—	1.36

<sup>†</sup>2020 and 2021 statistical projections and rates based on these projections.

Sources: Fatalities: 2011-2018 FARS final file, 2019 FARS annual report file; VMT: FHWA September 2021 traffic volume trends for 2020 and 2021 VMT



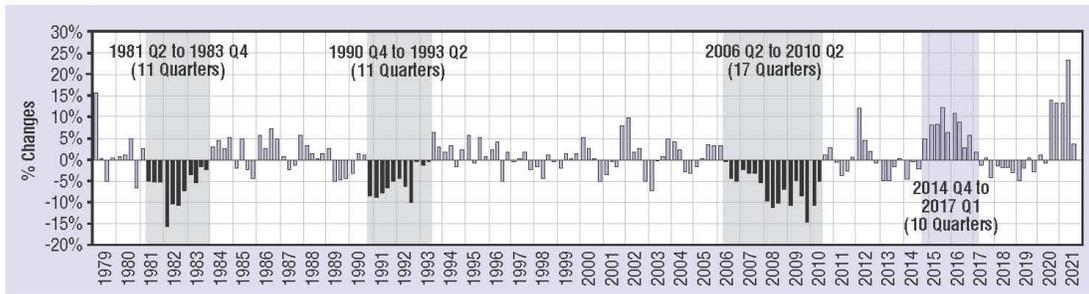
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Figure 1 shows the historical trend of the percentage change every quarter from the same quarter in the previous year, going back to 1979 (NHTSA has fatality data since 1975). The shading in the chart depicts the years during which there were significant numbers of consecutive quarters with increases/declines as compared to the corresponding quarters of the previous years. The declines during the early 1980s and 1990s lasted 11 consecutive quarters, while the most recent decline occurred over 17 consecutive quarters ending in the second quarter

of 2010. More recently, the significant increases in fatalities occurred over 10 consecutive quarters ending after the first quarter of 2017. The third and fourth quarter of 2020 and the first and especially the second quarter of 2021 showed significant increases in fatalities as compared to the corresponding quarters of 2019 and 2020. The percentage increase in the second quarter of 2021 is actually the highest quarterly percentage increase in FARS data recorded history.

**Figure 1: Percentage Change in Fatalities in Every Quarter as Compared to the Fatalities in the Same Quarter During the Previous Year**



To examine the effect of the COVID-19 pandemic, the quarterly projections of fatalities, fatality rates, and VMT are further split into monthly estimates for 2020 and 2021. Stay-at-home measures started in mid-March 2020, followed by the first full month of stay-at-home measures in April (the smallest VMT in this month). In May some States began to reopen selectively while almost all States partially reopened by June. After June States continued to adapt their local and statewide COVID-19 guidelines and assess specific reopening and reclosing efforts accordingly. Table 2 shows that fatalities are

projected to have decreased in February (February 2020 was a leap month) but increased in January and March-September 2021 (April and June are the months with the greatest and smallest increases in fatalities, respectively). The fatality rate per 100 million VMT shows an increase during January-March (1st quarter) 2021 (January is the month with the greatest increase in fatality rate) but a decrease during April-September (2nd and 3rd quarter) of 2021, as compared to the corresponding month (quarter) in 2020.

**Table 2: Fatalities, VMT, Fatality Rate by Month or Quarter in 2021, and the Percentage Change in Fatalities and VMT From the Corresponding Month or Quarter in 2020**

Year	1st Quarter				2nd Quarter				3rd Quarter				4th Quarter			
	Jan	Feb	Mar	Total	Apr	May	Jun	Total	Jul	Aug	Sep	Total	Oct	Nov	Dec	Total
<b>Fatalities in 2021 and Percentage Change in Fatalities for the Corresponding Month and Quarter From 2020</b>																
2020 <sup>1</sup>	2,665	2,675	2,560	7,900	2,310	3,095	3,715	9,120	3,770	3,820	3,715	11,305	3,795	3,430	3,130	10,355
2021 <sup>1</sup>	3,110	2,580	3,215	8,905	3,530	3,760	3,775	11,065	3,880	4,020	3,850	11,750	—	—	—	—
	16.7%	-3.6%	25.6%	12.7%	52.8%	21.5%	1.6%	21.3%	2.9%	5.2%	3.6%	3.9%				
<b>Fatality Rate per 100 Million Vehicle Miles Traveled (VMT)/VMT (in Billion) and Percentage Change in VMT</b>																
2020 <sup>1</sup>	1.06	1.14	1.16	1.12	1.39	1.46	1.51	1.46	1.45	1.51	1.50	1.49	1.46	1.47	1.28	1.41
	251.7	233.9	221.0	706.6	165.8	212.4	246.8	625.0	260.1	252.8	247.2	760.1	259.1	233.6	244.1	736.8
2021 <sup>1</sup>	1.39	1.25	1.22	1.29	1.37	1.37	1.34	1.36	1.34	1.47	1.44	1.41	—	—	—	—
	223.2	205.6	262.6	691.4	257.3	273.7	282.5	813.5	290.1	273.8	266.7	830.6				
	-11.3%	-12.1%	18.8%	-2.2%	55.2%	28.9%	14.5%	30.2%	11.5%	8.3%	7.9%	9.3%				

<sup>1</sup>2020 and 2021 statistical projections and rates based on these projections.

Sources: VMT: FHWA September 2021 traffic volume trends for 2020 and 2021 VMT



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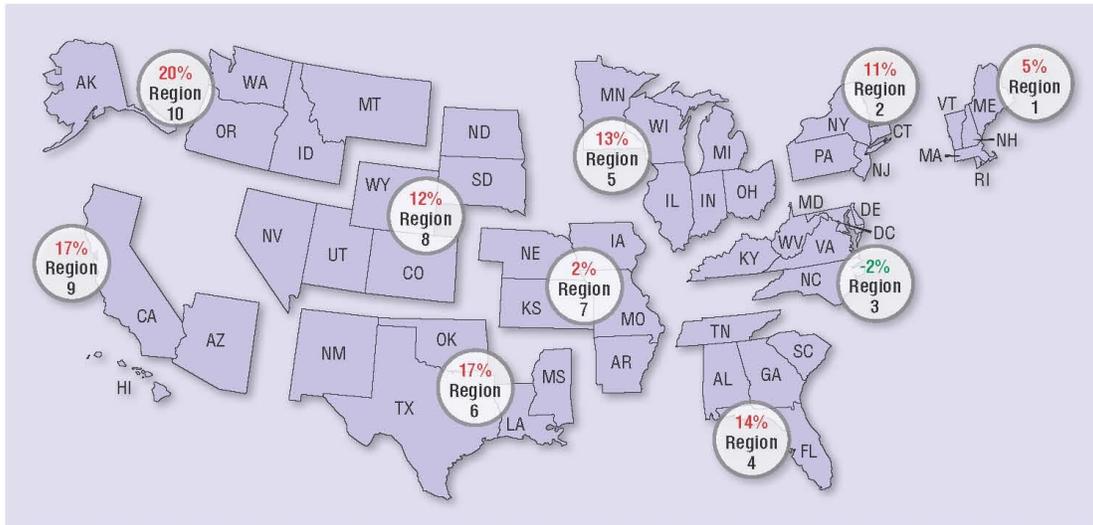
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**Regional Differences**

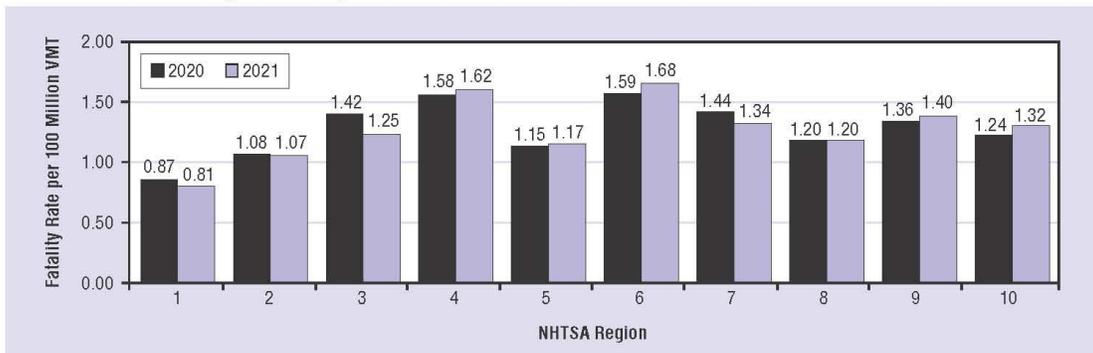
The statistical procedures employed in these projections were generated for each NHTSA administrative Region and were collated to create the national estimate. This allows for the comparison of Region estimates in 2021 with the projected 2020 counts. Figure 2 shows the percentage change in estimated fatalities in the first 9 months of 2021 from the projected fatalities in the same period of 2020 by NHTSA Region; 9 of the 10 Regions

experienced increases. Figure 3 shows the comparison of the estimated fatality rate per 100 million VMT in the first 9 months of 2021 with the estimated fatality rate per 100 million VMT in the same 9 months of 2020, by NHTSA Region; 5 of the 10 Regions presented increases. These estimates by NHTSA Region shown in Figures 2 and 3 are subject to change as the FARS annual report files for 2020 and 2021 are available next year.

**Figure 2: Percentage Change in Estimated Fatalities in First 9 Months of 2021 From Estimated Fatalities in the Same 9 Months of 2020, by NHTSA Region**



**Figure 3: Comparison of Estimated Fatality Rate in the First 9 Months of 2021 With Estimated Fatality Rate in the First 9 Months of 2020, by NHTSA Region**



Source: FHWA September 2021 Traffic Volume Trends for 2020 and 2021 VMT



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4

### State Differences

Given the significant changes in fatalities in 2020 and 2021, there has been significant interest in the traffic safety community in estimated changes at the State level to assess emerging trends. Subsequently, NHTSA has developed a methodology to generate such State-level estimates based on the distribution of estimated fatalities by State in a NHTSA Region and the month (see "Data and Methodology" section for more details). Table 3 shows the comparison of State's estimate in 2021 with the projected 2020 fatality counts and the percentage change

in the first 9 months of 2021 from the same period of 2020; thirty-eight States are projected to have experienced increases in fatalities during the first 9 months of 2021 as compared to the corresponding period in 2020 while 2 States remained unchanged and 10 States and the District of Columbia are projected to have decreases. These estimates by State shown in Table 3 are subject to change as the FARS annual report files for 2020 and 2021 are available next year.

**Table 3: Estimated Fatalities in the First 9 Months of 2021, and the Percentage Change in Estimated Fatalities From the Corresponding Estimate in 2020, by State**

State	2020 <sup>†</sup>	2021 <sup>†</sup>	Percent Change	State	2020 <sup>†</sup>	2021 <sup>†</sup>	Percent Change
Alabama	664	731	10.1%	Montana	151	179	18.5%
Alaska	53	51	-3.8%	Nebraska	185	151	-18.4%
Arizona	744	881	18.4%	Nevada	223	290	30.0%
Arkansas	491	507	3.3%	New Hampshire	79	87	10.1%
California	2,770	3,246	17.2%	New Jersey	416	496	19.2%
Colorado	469	492	4.9%	New Mexico	301	360	19.6%
Connecticut	216	253	17.1%	New York	765	811	6.0%
Delaware	92	88	-4.3%	North Carolina	1,190	1,202	1.0%
District of Columbia	29	28	-3.4%	North Dakota	72	89	23.6%
Florida	2,417	2,839	17.5%	Ohio	903	1,039	15.1%
Georgia	1,185	1,330	12.2%	Oklahoma	477	518	8.6%
Hawaii	60	68	13.3%	Oregon	341	441	29.3%
Idaho	151	206	36.4%	Pennsylvania	823	903	9.7%
Illinois	839	993	18.4%	Rhode Island	53	49	-7.5%
Indiana	639	699	9.4%	South Carolina	776	851	9.7%
Iowa	247	264	6.9%	South Dakota	102	118	15.7%
Kansas	321	308	-4.0%	Tennessee	885	1,015	14.7%
Kentucky	580	562	-3.1%	Texas	2,751	3,365	22.3%
Louisiana	605	692	14.4%	Utah	204	229	12.3%
Maine	128	110	-14.1%	Vermont	55	54	-1.8%
Maryland	424	368	-13.2%	Virginia	631	639	1.3%
Massachusetts	258	298	15.5%	Washington	424	467	10.1%
Michigan	795	882	10.9%	West Virginia	192	198	3.1%
Minnesota	294	369	25.5%	Wisconsin	463	463	0.0%
Mississippi	560	560	0.0%	Wyoming	98	92	-6.1%
Missouri	731	789	7.9%	<b>Total<sup>‡</sup></b>	<b>28,325</b>	<b>31,720</b>	<b>12.0%</b>

<sup>†</sup>2020 and 2021 statistical projections based on these projections.  
<sup>‡</sup>Unrounded State's fatalities estimate summation.



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5

### Discussion

There were marked increases in fatalities and the fatality rate per 100 million VMT in 2020. This increased trend in fatalities has continued into the first 9 months of 2021 (the degree of increase has greatly reduced during June-September). The increased trend in fatality rate per 100 million VMT continued into the first quarter of 2021, but the fatality rate has decreased in the second and third quarters of 2021 compared to 2020. NHTSA is continuing to gather and finalize data on crash fatalities for 2020 and 2021 using information from police crash reports and other sources. The annual report files for 2020 and 2021 will be available next year, which usually results in the revision of fatality totals and the ensuing fatality rates and percentage changes.

### Data and Methodology

The data used in this analysis come from several sources: NHTSA's FARS, Early Notification (EN) data, and Monthly Fatality Counts (MFC) (the EN and MFC data are not available to the public); and from FHWA's VMT estimates. FARS is a census of fatal traffic crashes in the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway and must result in the death of at least one person (occupant of a vehicle or a nonoccupant) within 30 days of the crash. FARS final files from January 2003 to December 2018 and FARS Annual Report file in 2019 are used. The EN program is designed as an Early Fatality Notification System to capture fatality counts from States more rapidly and provide near-real-time notification of fatality

counts from all jurisdictions reporting to FARS. The MFC data provide monthly fatality counts by State through sources that are independent from the EN or FARS systems. MFCs from January 2003 up to September 2021 are used. MFCs are reported mid-month for all prior months of the year. In order to estimate the traffic fatality counts for 2021, time series cross-section regression was applied to analyze the data with both cross sectional values (by NHTSA Region) and time series (by month), to model the relationship among FARS, MFC, and EN, the details of which are available in a Research Note (*Statistical Methodology to Make Early Estimates of Motor Vehicle Traffic Fatalities*, Report No. DOT HS 811 123). Furthermore, after the projected fatality counts for NHTSA Region ( $r$ ) and the month ( $m$ ),  $F\_Est_{mr}$  are obtained, the estimated fatality counts for a State ( $st$ ) in Region  $r$  and the month  $m$ ,  $F\_Est_{st|mr}$  can be calculated in term of the distribution of the fatalities by State  $st$  in Region  $r$  and the month  $m$  ( $F_{st|m}$ ):  $F\_Est_{st|mr} = (F_{st|m} / \sum_{all\ States\ in\ r} F_{st|m}) \times F\_Est_{mr}$ . For example, the estimated fatalities for Arizona in Region 9 (AZ, CA, HI) and the month  $m$  is:  $F\_Est_{AZ|m9} = (F_{AZ|m9} / (F_{AZ|m9} + F_{CA|m9} + F_{HI|m9})) \times F\_Est_{m9}$ .

The methodology used to generate the national and regional estimates for 2021 is the same as the one used by NHTSA to project the increase in the fatalities for the whole of 2020 (*Early Estimates of Motor Vehicle Traffic Fatalities in 2020*, Report No. DOT HS 813 115).

The suggested APA format citation for this document is:

National Center for Statistics and Analysis. (2022, February). *Early estimate of motor vehicle traffic fatalities for the first 9 months (January–September) of 2021* (Crash•Stats Brief Statistical Summary, Report No. DOT HS 813 240). National Highway Traffic Safety Administration.



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

For questions regarding the information presented in this report, please contact [NCSARequests@dot.gov](mailto:NCSARequests@dot.gov). This Crash•Stats and other general information on traffic safety can be found at <https://crashstats.nhtsa.dot.gov/>.



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**Appendix C**

**STATE POLICE N.J.**  
**FATAL ACCIDENT INVESTIGATION UNIT**  
**YEAR TO DATE - STATEWIDE FATAL CRASH STATISTICS**  
**FOR DECEMBER 31, 2021**

<u>FATAL CRASHES</u>		<u>FATALITIES</u>	
2021	- 661	2021	- 691
2020	- 550	2020	- 587
2019	- 524	2019	- 558

FATALITIES FROM 2020 TO 2021	104
PERCENTAGE CHANGE 2020 TO 2021	17.7%
FATALITIES FROM 2019 TO 2020	29
PERCENTAGE CHANGE 2019 TO 2020	5.2%

**VICTIM CLASSIFICATION**

	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>DRIVER</b>	289	304	368
<b>PASSENGER</b>	81	86	82
<b>PEDALCYCLIST</b>	12	18	23
<b>PEDESTRIAN</b>	176	179	218
<b>TOTAL</b>	<b>558</b>	<b>587</b>	<b>691</b>



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**Appendix D** – *please see NJSP report on page 32*

New Jersey State Police Crash Fatalities as of February 15, 2022

<https://nj.gov/njsp/info/fatalacc/pdf/swfcs2.pdf>

<https://nj.gov/njsp/info/fatalacc/index.shtml>



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**STATE POLICE N.J.**  
**FATAL ACCIDENT INVESTIGATION UNIT**  
**YEAR TO DATE - STATEWIDE FATAL CRASH STATISTICS**  
**FOR FEBRUARY 15, 2022**

**FATAL CRASHES**

2022 - 70  
2021 - 57  
2020 - 66

**FATALITIES**

2022 - 75  
2021 - 60  
2020 - 70

FATALITIES FROM 2021 TO 2022 15  
PERCENTAGE CHANGE 2021 TO 2022 25.0%  
FATALITIES FROM 2020 TO 2021 -10  
PERCENTAGE CHANGE 2020 TO 2021 -14.3%

**VICTIM CLASSIFICATION**

	2020	2021	2022
<b>DRIVER</b>	31	36	42
<b>PASSENGER</b>	9	6	12
<b>PEDALCYCLIST</b>	2	0	0
<b>PEDESTRIAN</b>	28	18	21
<b>TOTAL</b>	<b>70</b>	<b>60</b>	<b>75</b>

**2022 - AGE OF VICTIMS**

AGE	DRIVER	PASSENGER	PEDALCYCLIST	PEDESTRIAN
<b>16 AND UNDER</b>	0	2	0	0
<b>17</b>	1	0	0	0
<b>18 - 20</b>	1	2	0	0
<b>21 - 24</b>	7	1	0	1
<b>25 - 29</b>	1	0	0	2
<b>30 - 39</b>	4	0	0	4
<b>40 - 49</b>	5	1	0	3
<b>50 - 64</b>	12	2	0	5
<b>65 - 79</b>	8	2	0	4
<b>80 AND OVER</b>	3	2	0	2
<b>UNKNOWN</b>	0	0	0	0
<b>TOTAL</b>	<b>42</b>	<b>12</b>	<b>0</b>	<b>21</b>

THIS REPORT CONTAINS STATISTICS OF FATAL MOTOR VEHICLE CRASHES THAT HAVE BEEN REPORTED TO THE NEW JERSEY STATE POLICE FATAL ACCIDENT INVESTIGATION UNIT.

THE STATISTICS LISTED FOR PRIOR YEARS CORRESPOND TO THE CURRENT YEAR MONTH AND DAY.

THE STATISTICS CONTAINED IN THIS REPORT ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

Report Run: 15-FEB-22 10:00 AM