



## MPO SELF-CERTIFICATION

### Performance Measure (PM) Targets for Safety (PM1) Federal Fiscal Year 2021 Approved on November 19th, 2020 by the Santa Fe MPO Transportation Policy Board

The Santa Fe Metropolitan Planning Organization hereby certifies that the following, attached via Appendix A, Federal Fiscal Year (FFY) 2021 Targets for Safety (PM 1) for New Mexico, as required by the 23 CFR 490, Final Rule on the Highway Safety Improvement Program (HSIP) published March 15, 2016 (effective April 14, 2017) hereby approved and adopted on September 27<sup>th</sup>, 2018. These targets shall be incorporated into the Santa Fe MPO Metropolitan Transportation Plan upon completion of the update to the 2020 – 2045 MTP.

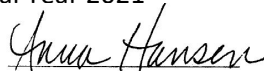
The state is required to set annual targets for five performance measures:

1. Number of Fatalities
2. Rate of Fatalities per 100 million vehicle miles travelled (VMT)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100 million VMT
5. Number of Non-motorized Fatalities and Serious Injuries

The first three are common measures and must be identical to the targets established for the Highway Safety Program (HSP). The NMDOT undertook a coordinated effort with the Metropolitan Planning Organizations (MPOs) and other stakeholders to set the targets.

ATTACHMENT A:

NMDOT FFY 2019 PM 1 Targets Report – 7/17/20 “Performance Measure (PM) Target Report – PM 1 Federal Fiscal Year 2021”



11/19/20

Anna Hansen, Chair Santa Fe MPO

Date



## Performance Measure (PM) Target Report – PM 1 2021 Safety Targets

This document outlines the 2021 Targets for Safety (PM 1) for New Mexico, as required by the 23 CFR 490, Final Rule on the Highway Safety Improvement Program (HSIP) published March 15, 2016 (effective April 14, 2017). The New Mexico Department of Transportation (NMDOT) Multimodal Planning and Programs Bureau (MPPB) is responsible for coordinating the setting of PM 1 targets.

### *Overview of PM 1 Measures*

The state is required to set annual targets for five performance measures:

1. Number of Total Fatalities
2. Number of Serious Injuries
3. Fatalities per 100 million vehicle miles travelled (VMT) or fatality rate
4. Serious Injuries per 100 million VMT or serious injury rate
5. Number of Non-motorized Fatalities and Serious Injuries

The first three are common measures and must be identical to the targets established for the Highway Safety Plan (HSP).

### *Coordination with Metropolitan Planning Organizations (MPOs)*

The NMDOT undertook a coordinated effort with the Metropolitan Planning Organizations (MPOs), the HSP team and other stakeholders to set the targets.

1. Numerous internal meetings took place in winter of 2020 between staff of the NMDOT Planning Division and Traffic Safety Division, responsible for the HSP to review and analyze crash data and trends. A representative of the University of New Mexico (UNM), contracted by NMDOT to maintain the state's crash database, attended the meetings and provided crash data and analysis.
2. On May 12, 2020, the NMDOT Safety Division held a meeting with stakeholders to discuss and adopt the targets required in the HSP. The targets were revised following the meeting, to reflect the revised 2017 VMT, approved by FHWA, and the updated 2018 and 2019 crash datasets provided by UNM.
3. On July 15, 2020, the NMDOT Safety Committee reviewed and approved the 2021 Safety Targets as outlined in this report for submittal in the 2021 HSIP Annual Report.
4. On July 17, 2020, MPPB staff emailed a draft of this report, outlining the adopted state PM1 targets, to the MPOs for review and comments. The MPOs submitted comments and corrections, which MPPB staff incorporated into this report. Other than those edits, the MPOs agreed to the targets as outlined.
5. The MPOs have until February 27, 2021 to formally adopt the NMDOT PM 1 targets or set their own quantifiable targets.

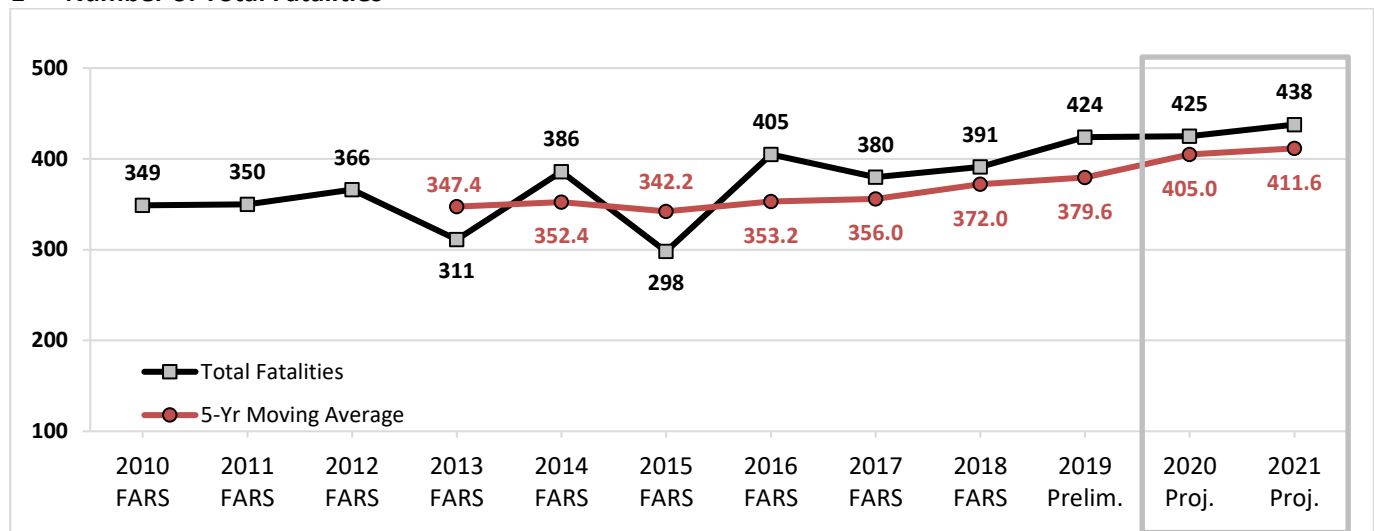
### *Data Methodologies and Assumptions*

In setting the 2021 safety targets, NMDOT and stakeholders did not rely solely on the data projections but used the data in combination with their discussions regarding other relevant factors and their assessment of the potential safety impacts of various strategies and projects. NMDOT worked with UNM to determine methodologies and assumptions required to set the targets. These are as follows:

- NMDOT uses Excel to plot a linear best fit line based on 6-years of actual data to project for future years.
- Vehicle Miles Travelled (VMT) - The annual VMT is from the FHWA Highway Statistics Series (<https://www.fhwa.dot.gov/policyinformation/statistics/2017/pdf/vm2.pdf>). Within this link, simply replace '2017' with the desired year to obtain the VMT for the year of interest.
  - Appendix A of this document displays the annual VMT from the FHWA Highway Statistics Series using a unit of 100 Million VMT (HVMVT). FHWA guidance documents insist on using HVMVT for calculating fatality rates and serious injury rates, hence, Appendix A displays the annual VMT adjusted to HVMVT.
- The preliminary Annual VMT for 2019 is provided by the NMDOT Planning Division, Data Management Bureau.
- Crash Data for 2019 is preliminary and provided by UNM.
- The source data table is attached as Appendix B. This data was used to calculate the linear regression equations that yield the 2020 and 2021 projections. It also contains the data that was used to calculate the five-year moving averages.

## NMDOT PM 1 (Safety) 2021 Targets

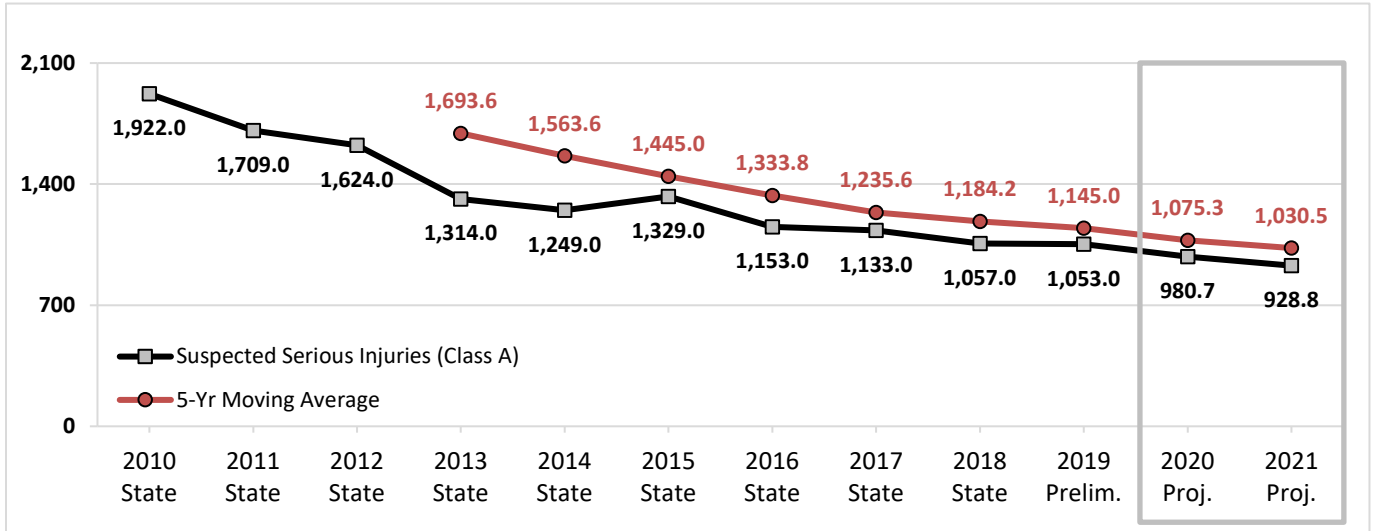
### 1 Number of Total Fatalities



**NMDOT 2021 Target for Number of Total Fatalities: 411.6**

**NMDOT Justification:** Although five-year average fatalities rose by a moderate 5.5 percent between 2014 and 2018, preliminary and projected data indicate that fatalities will increase by about 10.6 percent between 2018 and 2021. In 2019, fatalities involving large, personal vehicles (SUVs/Pick-up Trucks/Vans/4-Wheel Drives) or involving pedestrians have increased and accounted for 53.3 percent of all crash fatalities. Given the prevalence of large, personal vehicle ownership, and projected increase in fatalities overall, the five-year average projection of 411.6 is determined to be the 2021 target.

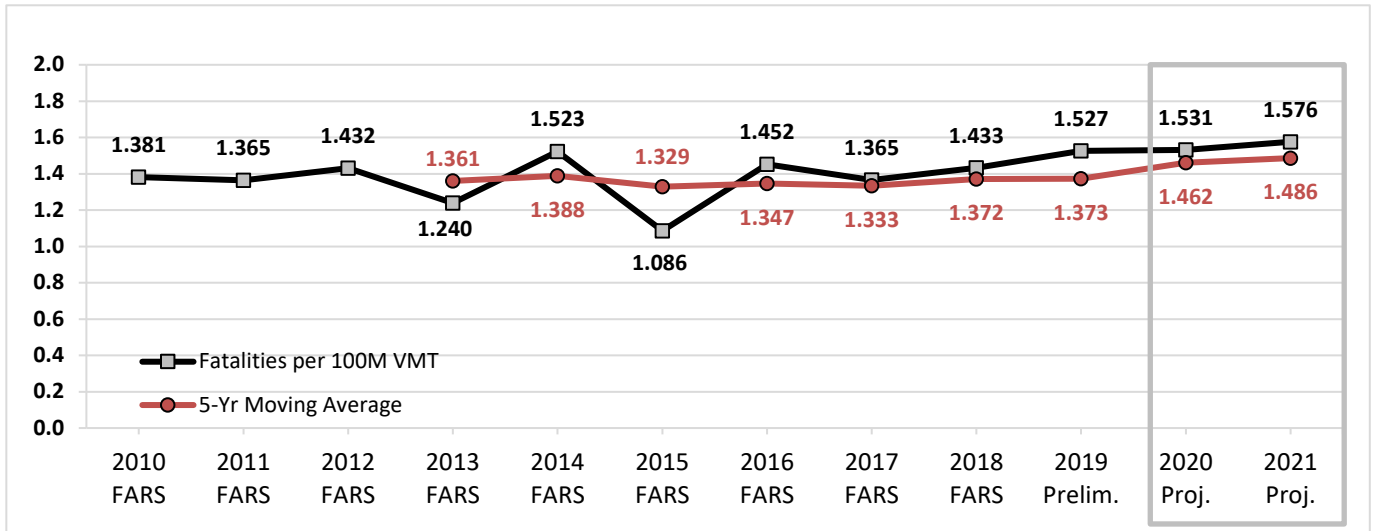
## 2 Number of Serious Injuries



**NMDOT 2021 Target for Number of Serious Injuries: 1,030.5**

**NMDOT Justification:** Five-year average serious injuries are projected to fall by about 13.2 percent between 2018 and 2021, and the State anticipates a continued reduction in serious injuries in 2020. The five-year average projection of 1,030.5 is the 2021 target.

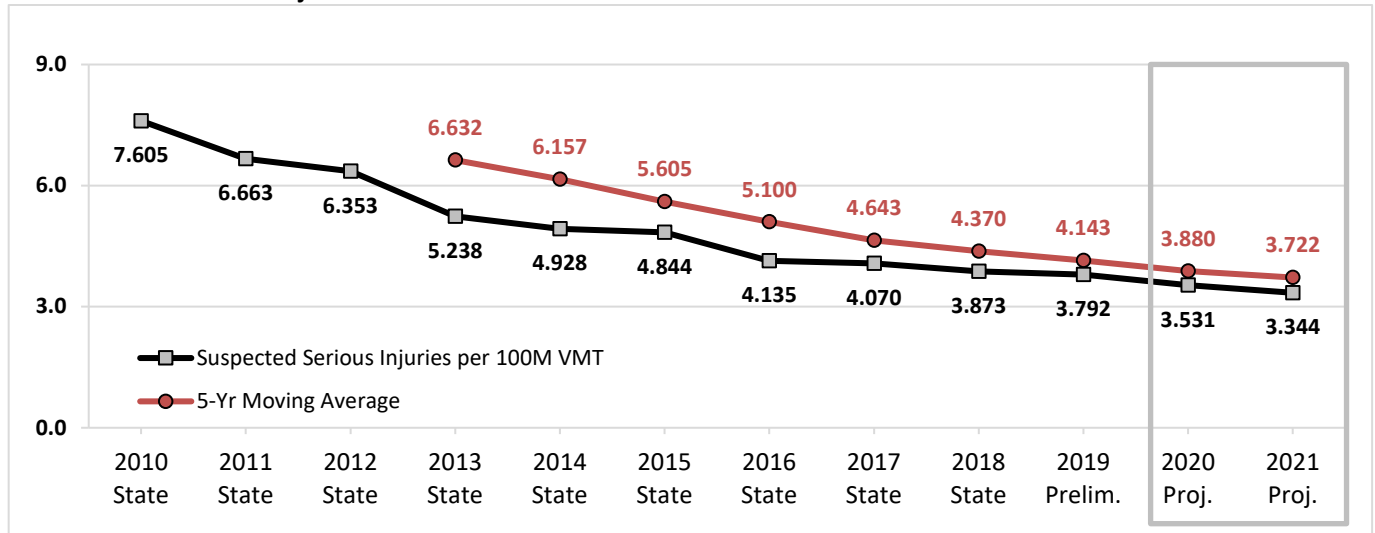
## 3 Rate of Fatalities



**NMDOT 2021 Target for Rate of Fatalities: 1.486**

**NMDOT Justification:** Five-year average fatalities are expected to increase in 2021 from 2017, thus the projected five-year average of 1.486 is the 2021 target. Due to the uncertainty of the COVID-19 pandemic's impact on VMT, the preliminary 2019 VMT value is also used for the 2020 and 2021 VMT values.

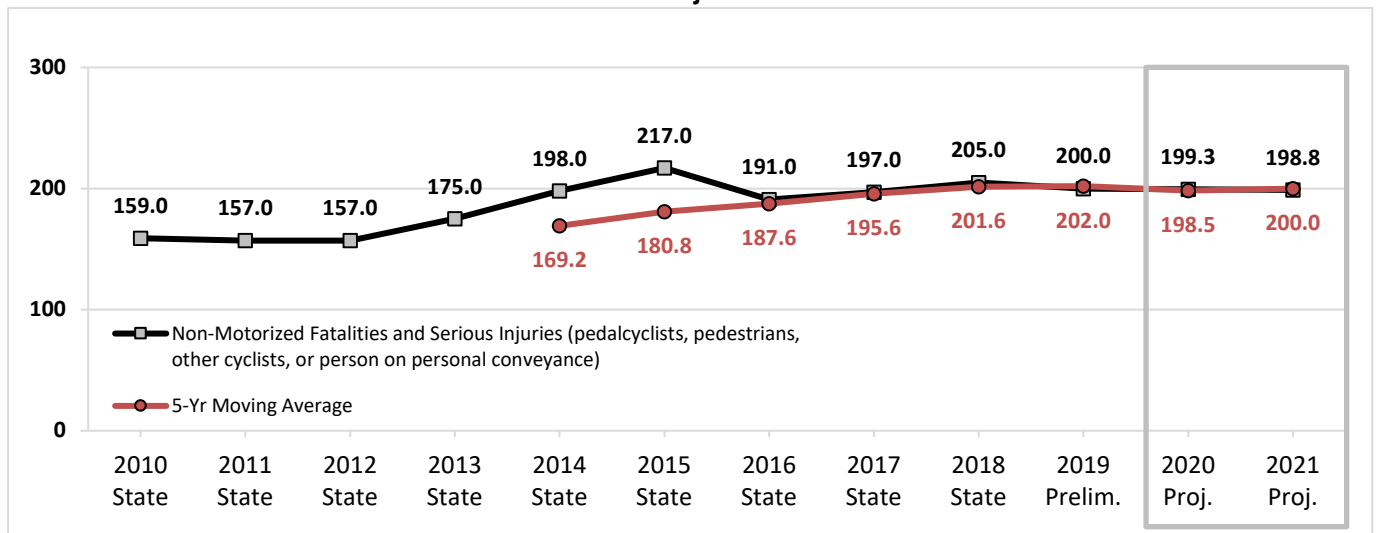
#### 4 Rate of Serious Injuries



**NMDOT 2021 Target for Rate of Serious Injuries: 3.722**

**NMDOT Justification:** Five-year average serious injury rates are projected to continue falling, thus the five-year average projection of 3.722 is the 2021 target.

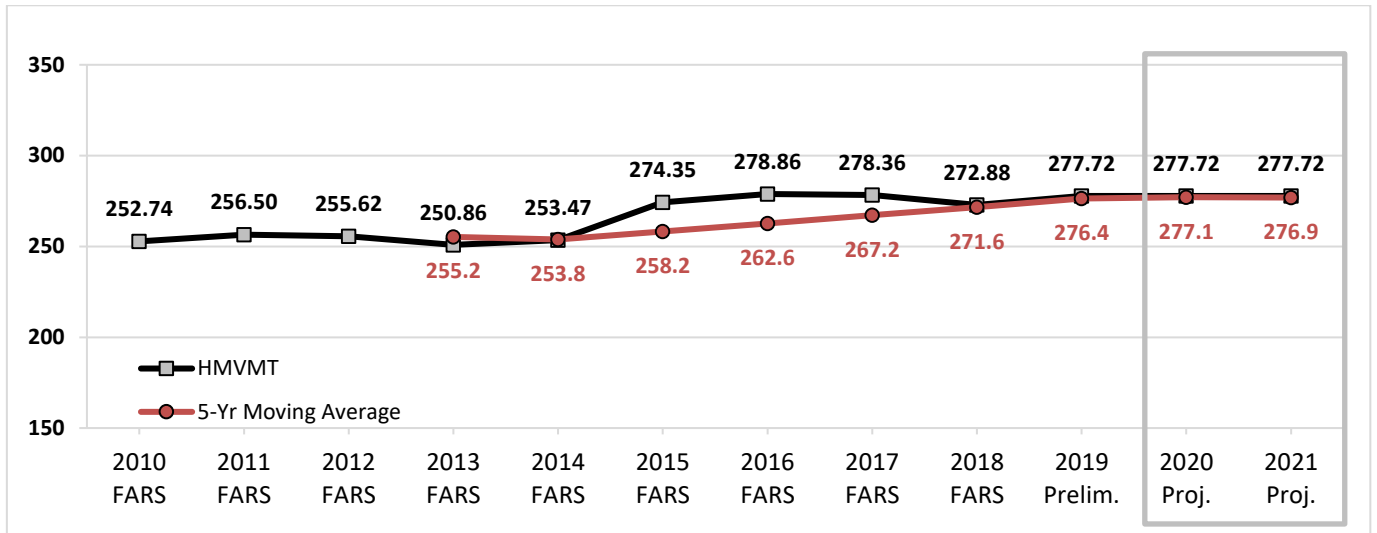
#### 5 Number of Non-motorized Fatalities and Serious Injuries



**NMDOT 2021 Target for Number of Non-motorized Fatalities and Serious Injuries: 200.0**

**NMDOT Justification:** Five-year average non-motorized fatalities and serious injuries are projected to remain relatively constant over the next two years from 2020 to 2021. The five-year average projection of 200.0 is the 2021 target.

**Appendix A: Five-Year Moving Average of Hundred Million VMT (HMVMT)**



**Appendix B: Data Values and Sources**

Performance Measure	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fatalities*	361	349	350	366	311	386	298	405	380	391	424	425	438
Serious Injuries**	1,899	1,922	1,709	1,624	1,314	1,249	1,329	1,153	1,133	1,057	1,053	980.7	928.8
HMVMT†	260.13	252.74	256.50	255.62	250.86	253.47	274.35	278.86	278.36	272.88	277.72	277.72	277.72
Fatality rate (per HMVMT)	1.388	1.381	1.365	1.432	1.240	1.523	1.086	1.452	1.365	1.433	1.527	1.531	1.576
Serious injury rate (per HMVMT)	7.300	7.605	6.663	6.353	5.238	4.928	4.844	4.135	4.070	3.873	3.792	3.531	3.344
Number non-motorized fatalities***	44	41	46	68	55	78	62	81	81	95			
Number of non-motorized serious injuries**	117	118	111	89	120	120	155	110	116	110			
Non-motorized fatalities and serious injuries****	161	159	157	157	175	198	217	191	197	205	200	199.3	198.8
Fatalities 5YRA start @2014						352.4	342.2	353.2	356.0	372.0	379.6	405.0	411.6
Fatalities 5YRA start @2013					347.4	352.4	342.2	353.2	356.0	372.0	379.6	405.0	411.6
Serious Injuries 5YRA start @2014						1,563.6	1,445.0	1,333.8	1,235.6	1,184.2	1,145.0	1,075.3	1,030.5
Serious Injuries 5YRA start @2013					1,693.6	1,563.6	1,445.0	1,333.8	1,235.6	1,184.2	1,145.0	1,075.3	1,030.5
Fatality rate (per HMVMT) 5YRA start @2014						1.388	1.329	1.347	1.333	1.372	1.373	1.462	1.486
Fatality rate (per HMVMT) 5YRA start @2013					1.361	1.388	1.329	1.347	1.333	1.372	1.373	1.462	1.486
Serious injury rate (per HMVMT) 5YRA start @2014						6.157	5.605	5.100	4.643	4.370	4.143	3.880	3.722
Serious injury rate (per HMVMT) 5YRA start @2013					6.632	6.157	5.605	5.100	4.643	4.370	4.143	3.880	3.722
Number non-motorized fatalities 5YRA						57.6	61.8	68.8	71.4	79.4			
Number of non-motorized serious injuries 5YRA						111.6	119.0	118.8	124.2	122.2			
Non-motorized fatalities and serious injuries 5YRA start @2014						169.2	180.8	187.6	195.6	201.6	202.0	198.5	200.0
Non-motorized fatalities and serious injuries 5YRA start @2013					161.8	169.2	180.8	187.6	195.6	201.6	202.0	198.5	200.0
HMVMT 5YRA						253.8	258.2	262.6	267.2	271.6	276.4	277.1	276.9

\*Source: 2009-2018 is from FARS

\*\*Source: Dataset received from NMDOT on 1/9/2020 (excludes 2018 & 2019 data)

\*\*\*Source: <https://www-fars.nhtsa.dot.gov/People/PeopleAllVictims.aspx> & see image on "FARS\_Screenshots" sheet for non-motorized fatality information

\*\*\*\*Non-motorized definition per FHWA: pedalcyclists, pedestrians, other cyclists, or person on personal conveyance

†HMVMT source (change four-digit year to desired calendar year in link): <https://www.fhwa.dot.gov/policyinformation/statistics/2009/vm2.cfm>

2019 crash data is preliminary from dataset received on 24-June-2020.

Linear regression (best fit straight line;  $y = 12.686x + 336.27$ ) based on 2014-2019 fatalities

Linear regression (best fit straight line;  $y = -51.886x + 1,343.9$ ) based on 2014-2019 A-Injuries

Linear regression (best fit straight line;  $y = -0.5714x + 203.33$ ) based on 2014-2019 non-motorized fatalities and A-Injuries

The VMT for 2020 and 2021 are the same as the preliminary 2019 VMT. The rates for 2019 - 2021 use NMDOT preliminary 2019 VMT