



# SAFETY PERFORMANCE MEASURES

2023



## FHWA'S 5 SAFETY PERFORMANCE MEASURES

### Regional 5-Year Rolling Averages of:

- 1 Number of Fatalities
- 2 Rate of Fatalities per 100 million VMT (Vehicle Miles Traveled)
- 3 Number of Serious Injuries
- 4 Rate of Serious Injuries per 100 million VMT
- 5 Number of Non-motorized Fatalities & Serious Injuries



# SAFETY PERFORMANCE MEASURES: SUMMARY

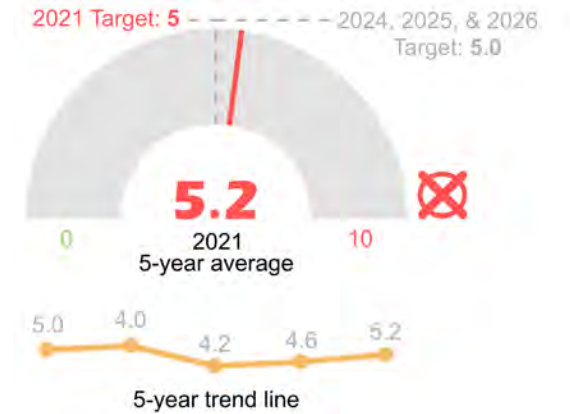
PM 1: Number of Vehicle Fatalities



PM 2: Rate of Vehicular Fatalities per 100 Million Vehicle Miles Traveled



PM 5: Non-Motorized Fatalities & Serious Injuries



PM 3: Number of Serious Injuries



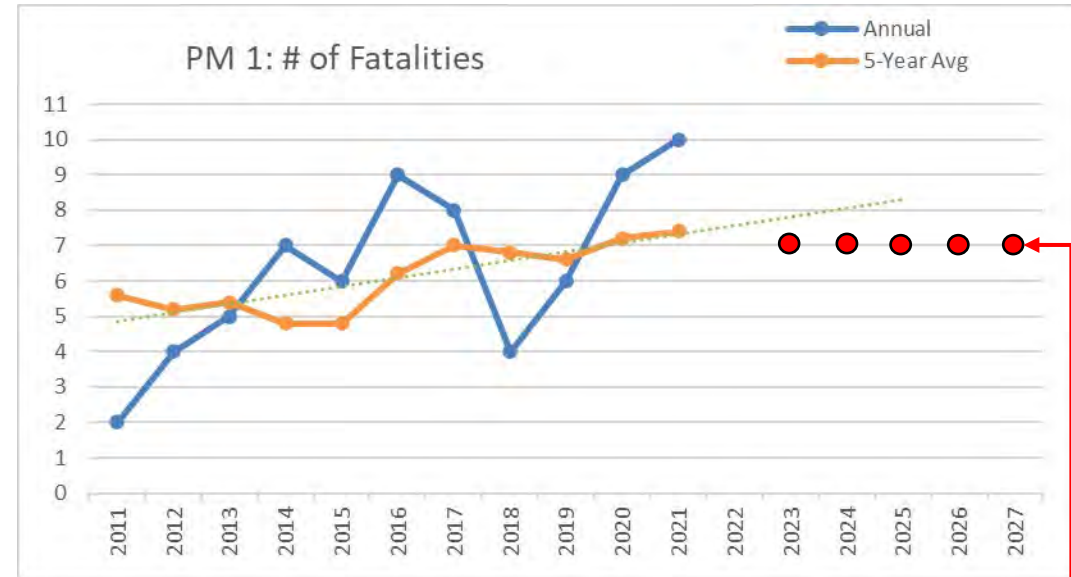
PM 4: Rate of Serious Injuries per 100 Million Vehicle Miles Traveled



# TARGET 1: # OF VEHICLE FATALITIES

Year	Annual Fatalities	5-Year Avg	Target
2011	2		-
2012	4		-
2013	5		-
2014	7		-
2015	6	4.8	-
2016	9	6.2	-
2017	8	7.0	-
2018	4	6.8	5
2019	6	6.6	5
2020	9	7.2	4
2021	10	7.4	5
2022	-	-	-
2023	-	-	7
2024	-	-	7
2025	-	-	7
2026	-	-	7
2027	-	-	7

  
Off Target

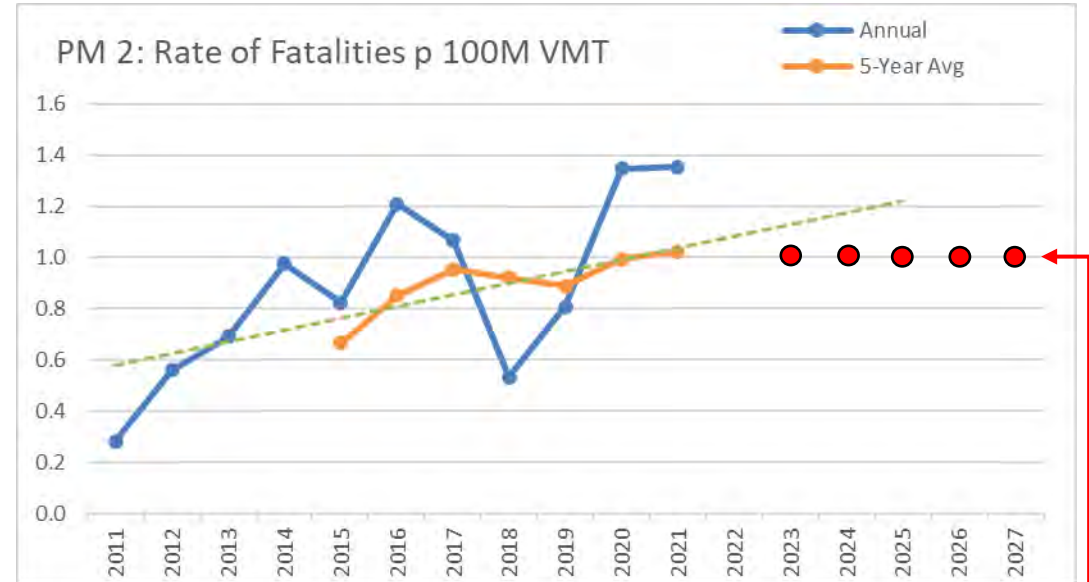


# TARGET 2: RATE OF VEHICLE FATALITIES P. 100M VMT

Year	Annual Fatalities	100M VMT	Fatality Rate p/100M VMT	5-Year Avg	Target
2011	2	7.10	0.28		-
2012	4	7.13	0.56		-
2013	5	7.24	0.69		-
2014	7	7.17	0.98		-
2015	6	7.29	0.82	0.67	-
2016	9	7.45	1.21	0.85	-
2017	8	7.50	1.07	0.95	-
2018	4	7.49	0.53	0.92	0.70
2019	6	7.41	0.81	0.89	0.65
2020	9	6.68	1.35	0.99	0.60
2021	10	7.38	1.35	1.02	0.65
2022					-
2023	-	-	-	-	1.00
2024	-	-	-	-	1.00
2025	-	-	-	-	1.00
2026	-	-	-	-	1.00
2027	-	-	-	-	1.00



Off Target



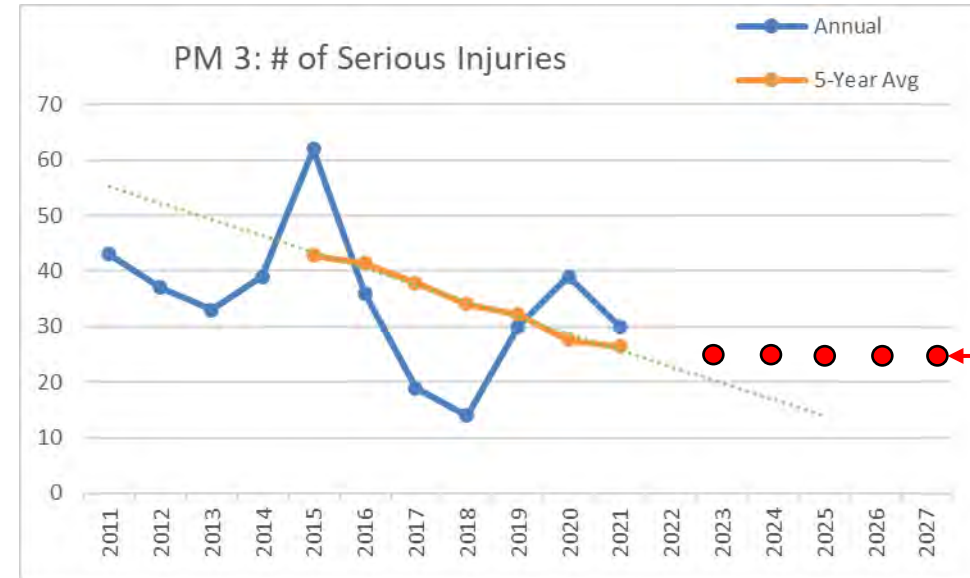
\* VMT details found in Appendix A



# TARGET 3: # OF SERIOUS INJURIES

Year	Annual Serious Injuries	5-Year Avg	Target
2011	43		-
2012	37		-
2013	33		-
2014	39		-
2015	62	42.8	-
2016	36	41.4	-
2017	19	37.8	-
2018	14	34	32
2019	30	32.2	32
2020	39	27.6	32
2021	30	26.4	18
2022			-
2023	-	-	25
2024	-	-	25
2025	-	-	25
2026	-	-	25
2027			25

**X**  
Off Target

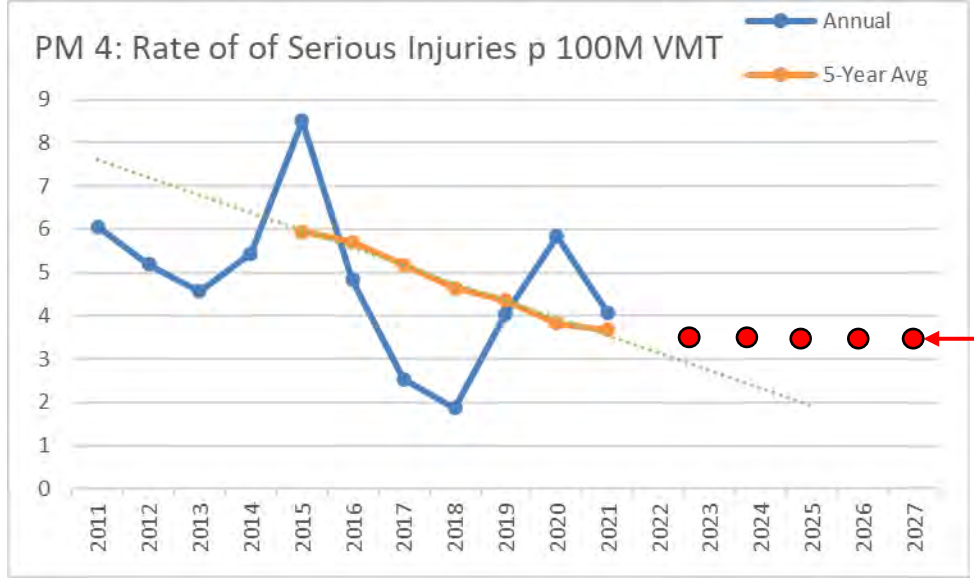


# TARGET 4: RATE OF SERIOUS INJURIES P. 100M VMT

Year	Annual Serious Injuries	100M VMT	SI Rate p/100M VMT	5-Year Avg	Target
2011	43	7.10	6.06		-
2012	37	7.13	5.19		-
2013	33	7.24	4.56		-
2014	39	7.17	5.44	-	-
2015	62	7.29	8.50	5.95	-
2016	36	7.45	4.83	5.71	-
2017	19	7.50	2.53	5.17	-
2018	14	7.49	1.87	4.64	4.4
2019	30	7.41	4.05	4.36	4.3
2020	39	6.68	5.84	3.82	4.2
2021	30	7.38	4.06	3.67	3
2022					-
2023	-	-	-	-	3.5
2024	-	-	-	-	3.5
2025	-	-	-	-	3.5
2026	-	-	-	-	3.5
2027					3.5



Off Target



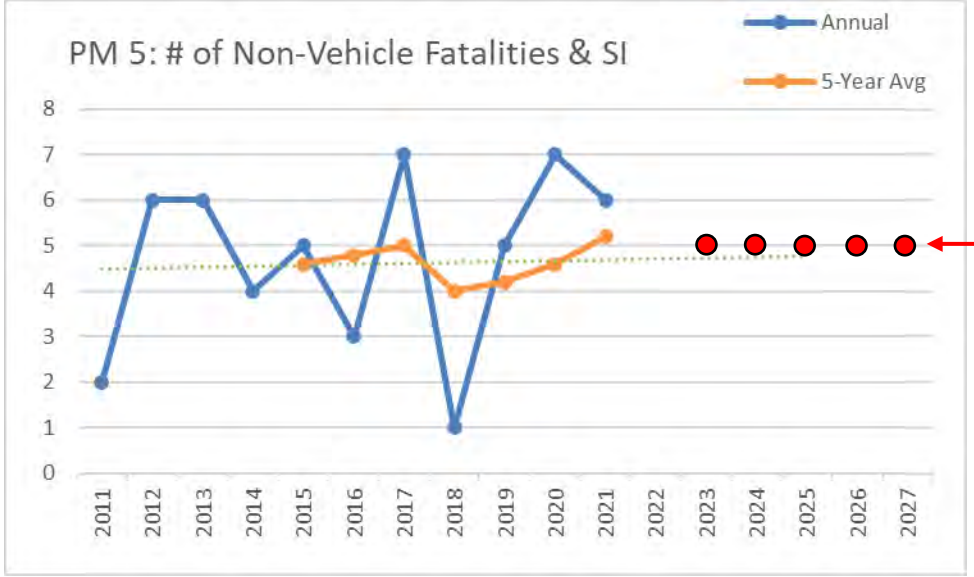
\* VMT details found in Appendix A



# TARGET 5: # OF NON-VEHICULAR FATALITIES & SERIOUS INJURIES






Year	Annual Fatalities	5-Year Avg	Target
2011	3		-
2012	6		-
2013	7		-
2014	4		-
2015	6	4.6	-
2016	3	4.8	-
2017	8	5	-
2018	2	4	1
2019	5	4.2	0
2020	7	4.6	0
2021	5	5.2	5
2022	-	-	-
2023	-	-	5
2024	-	-	5
2025	-	-	5
2026	-	-	5
2027	-	-	5

**X**  
Off Target





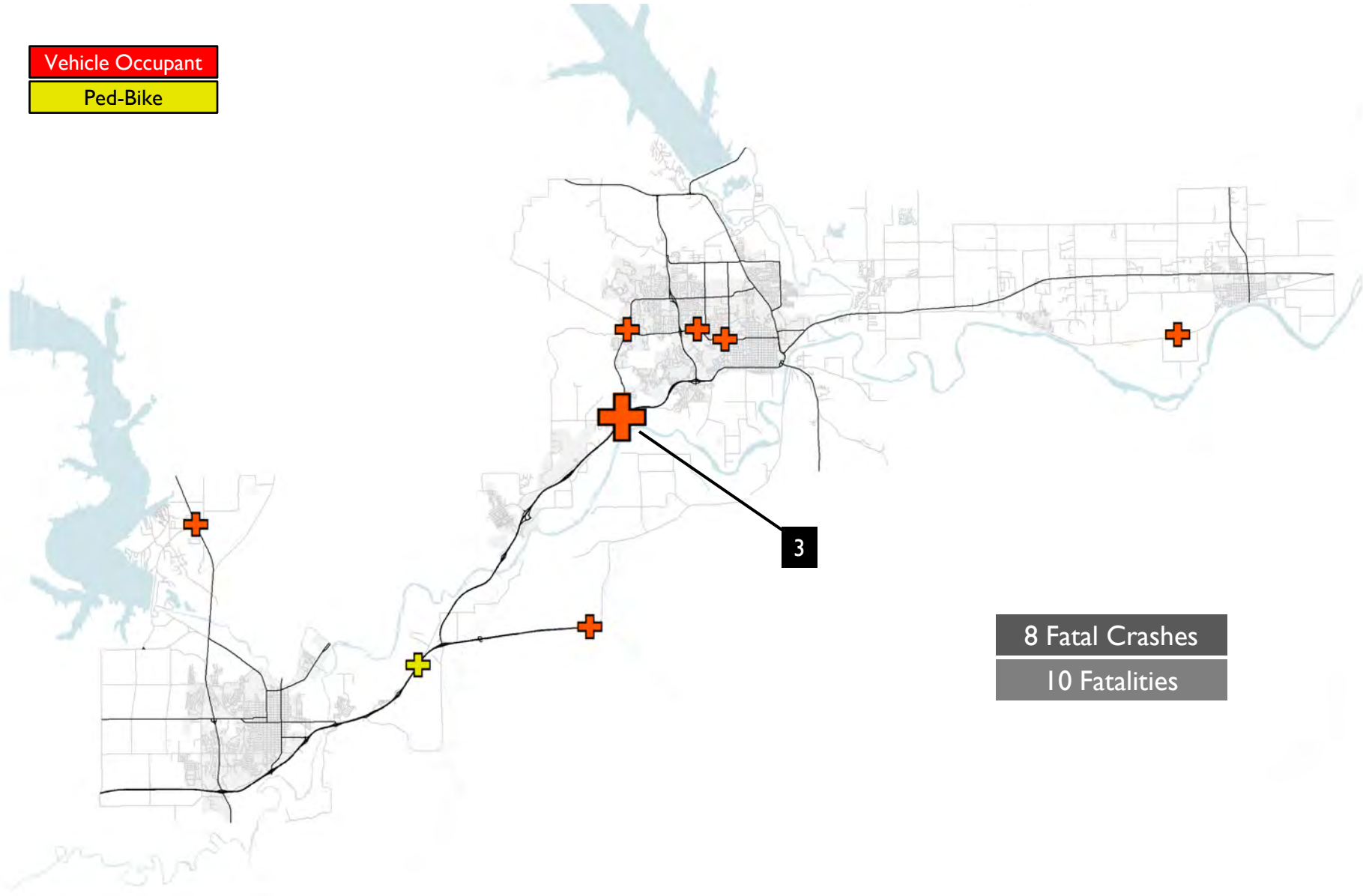
# TARGET SUMMARY

	Performance Measure	2021 5-Year Avg	2021 Targets (set in 2018)	Future Targets
1	# of Fatalities	7.4	5  Off Target	2024: 7 2025: 7 2026: 7
2	Rate of Fatalities per 100 million VMT	1.02	0.65  Off Target	2024: 1.00 2025: 1.00 2026: 1.00
3	# of Serious Injuries	26.4	18  Off Target	2024: 25 2025: 25 2026: 25
4	Rate of Serious Injuries per 100 million VMT	3.7	3.0  Off Target	2024: 3.5 2025: 3.5 2026: 3.5
5	# of Non-Vehicular Fatalities & Serious Injuries	5.2	5  Off Target	2024: 5 2025: 5 2026: 5



# CRASH MAPS: FATALITIES

Vehicle Occupant  
Ped-Bike



8 Fatal Crashes  
10 Fatalities

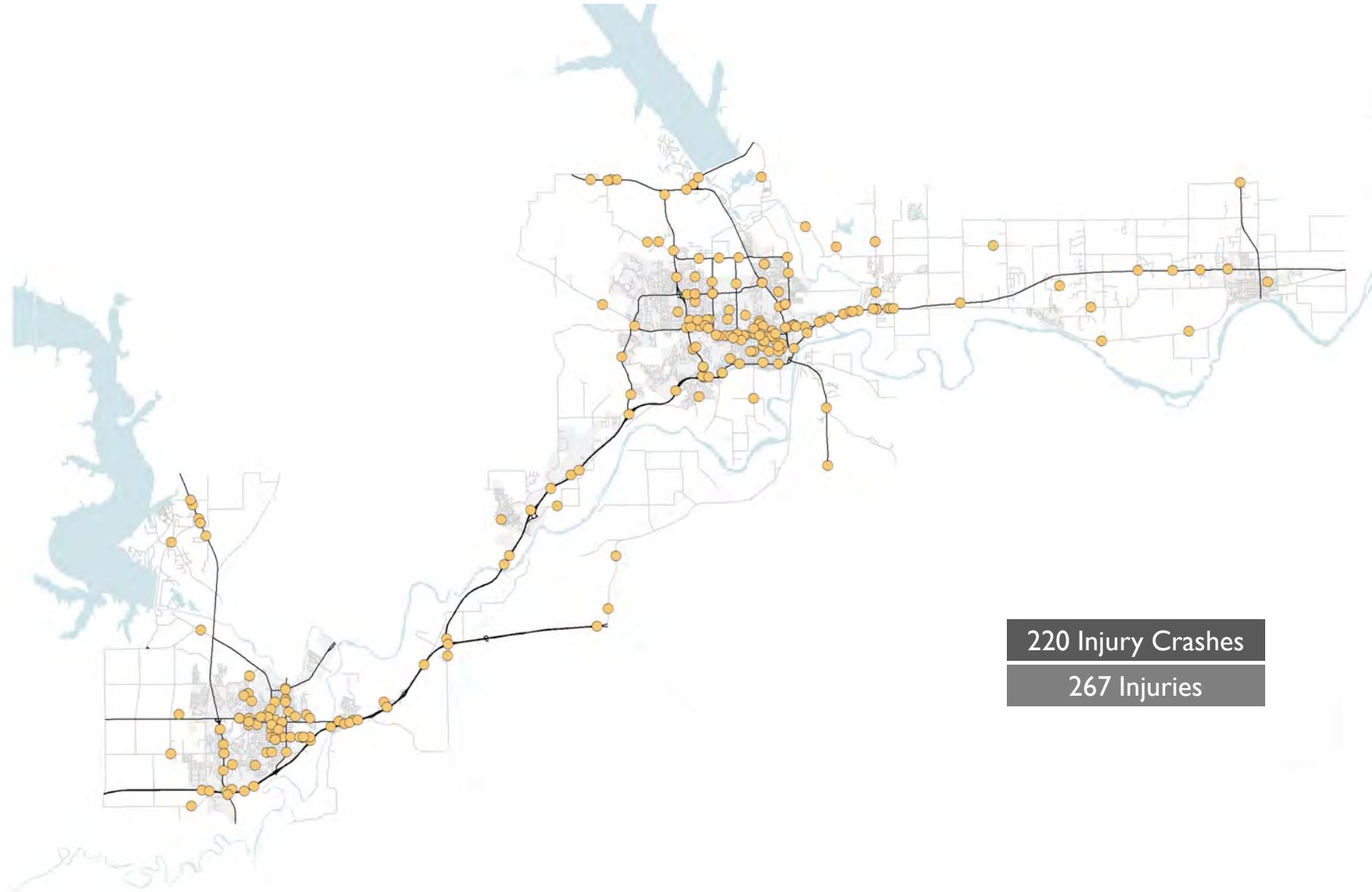


# CRASH MAPS: SERIOUS INJURIES

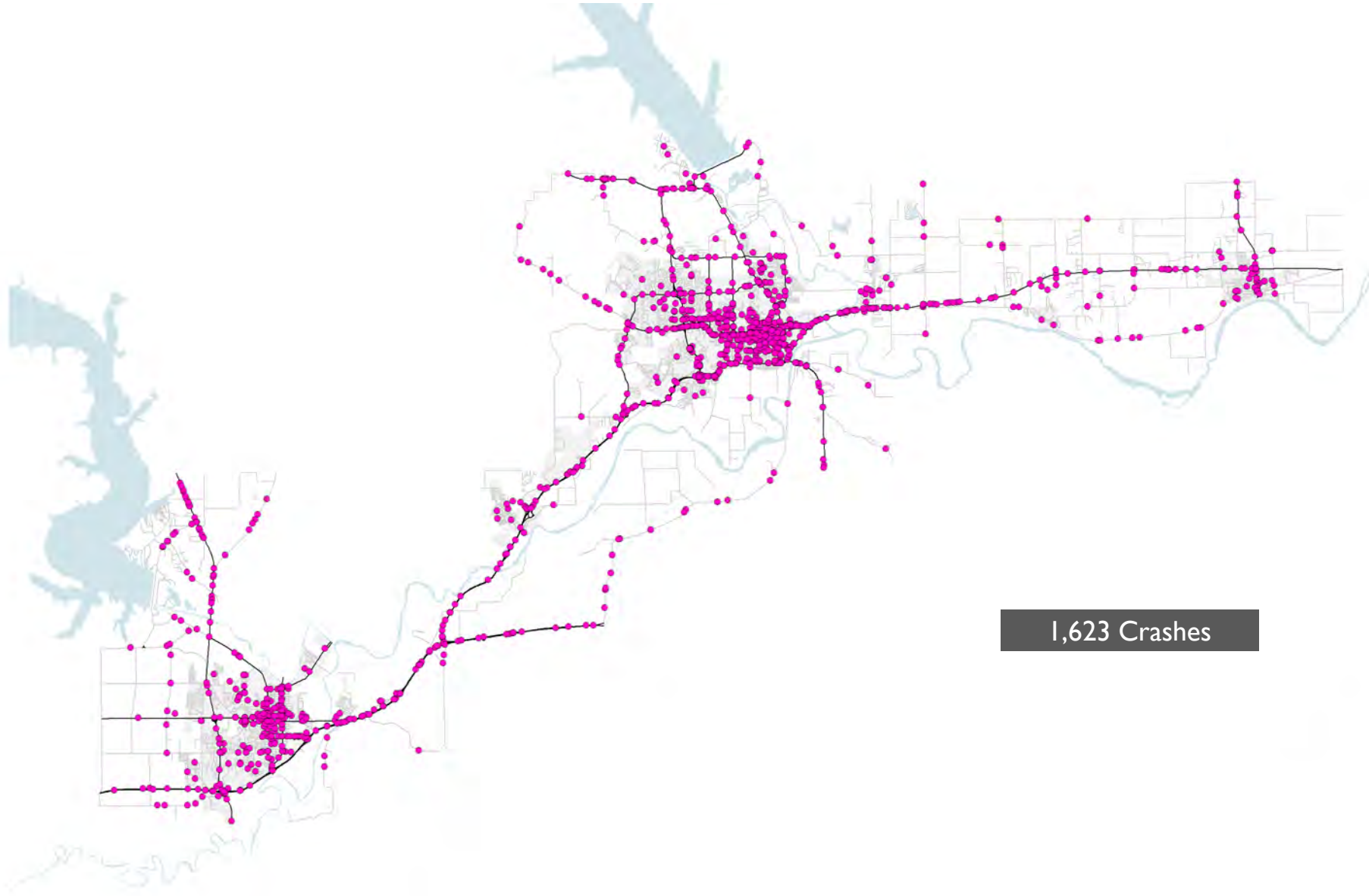
Vehicle Occupant  
Ped-Bike



# CRASH MAPS: ALL INJURIES



# CRASH MAPS: ALL CRASHES

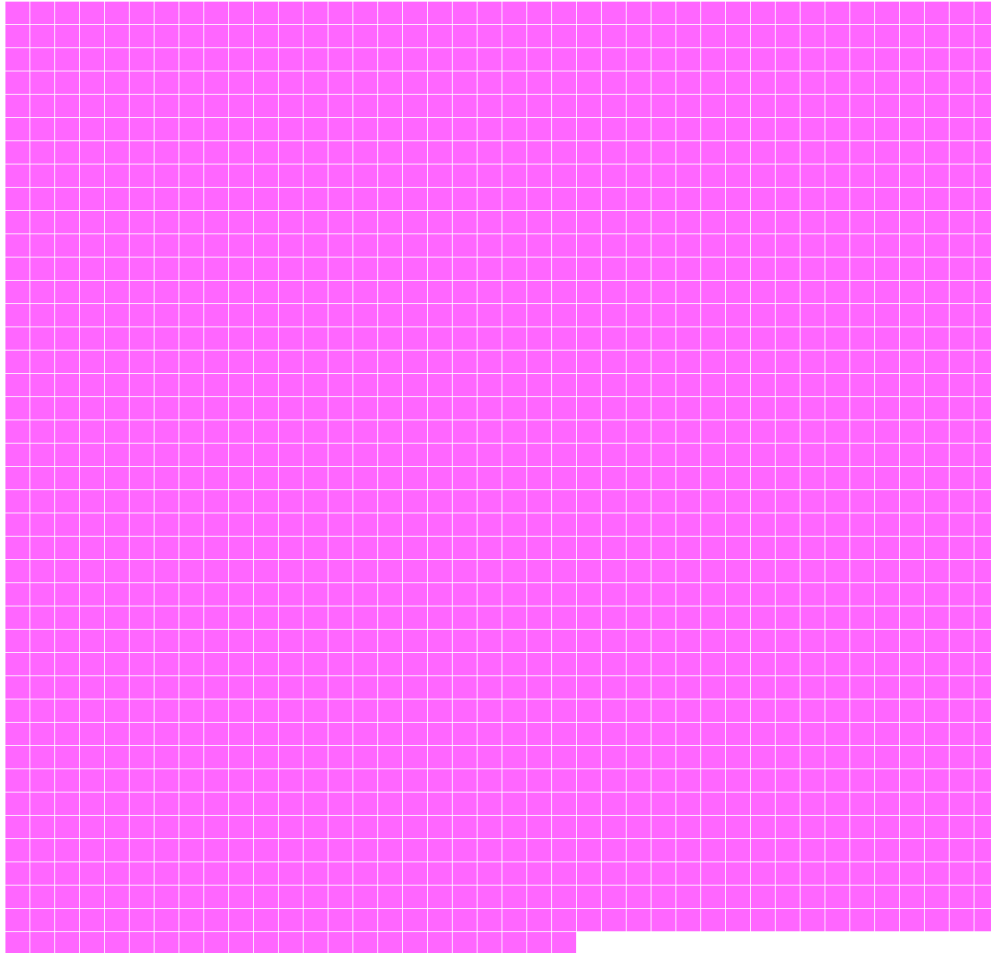


1,623 Crashes

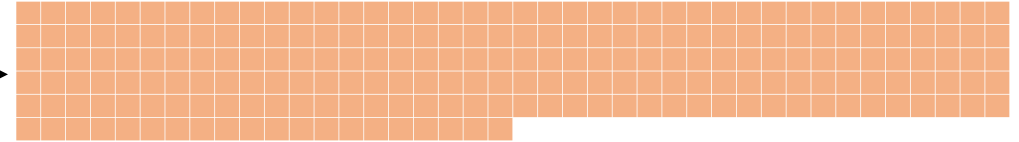


# CRASHES

All Crashes (1,623)



Injury Crashes (220)



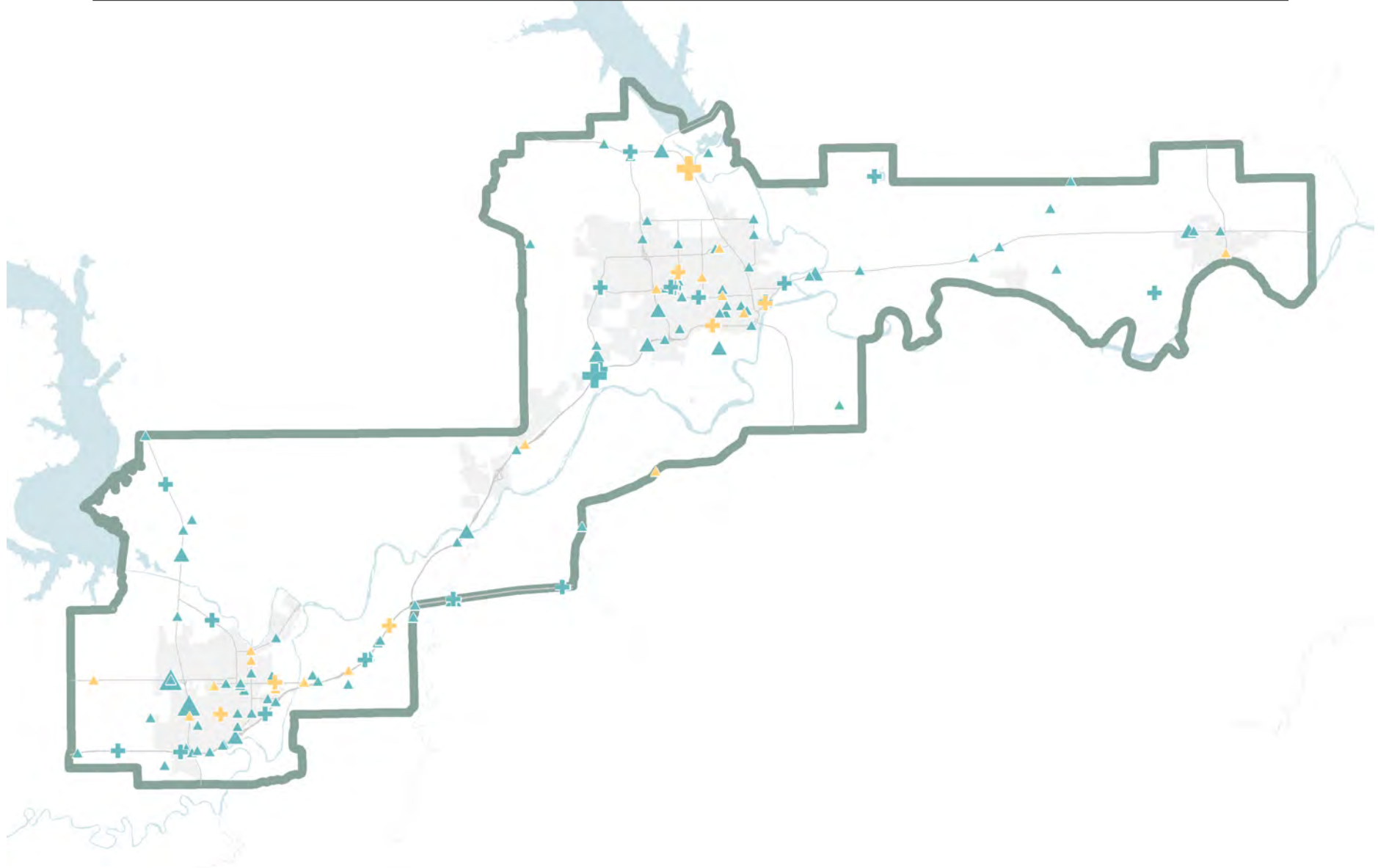
Serious Injury Crashes (26)



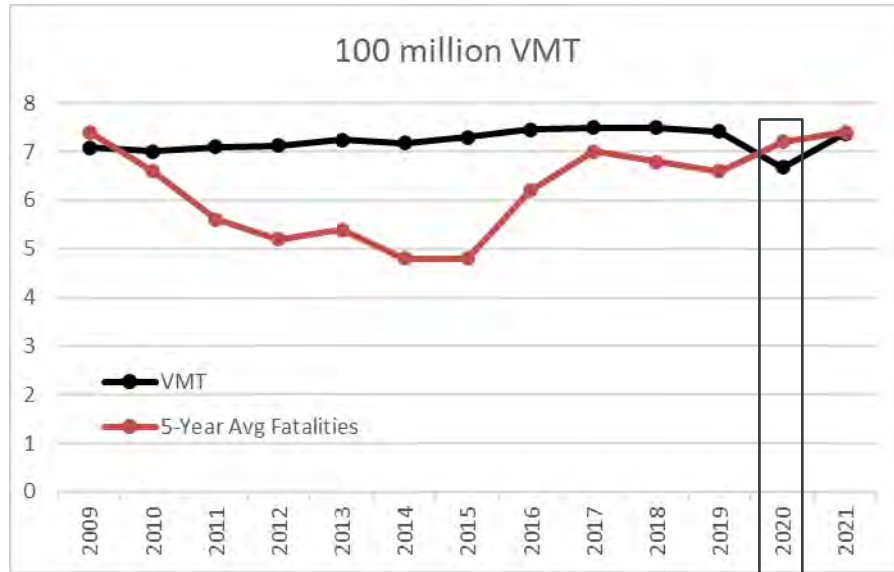
Fatal Crashes (8)



# CRASHES: 2017-2021



# TRENDS & CONCERNS



+ Minimal VMT growth

— Since 2016, Fatalities p 100M VMT have risen: more people dying in same amount of miles driven

**9.9% Drop in VMT**

Major reduction due to Covid 19 pandemic.

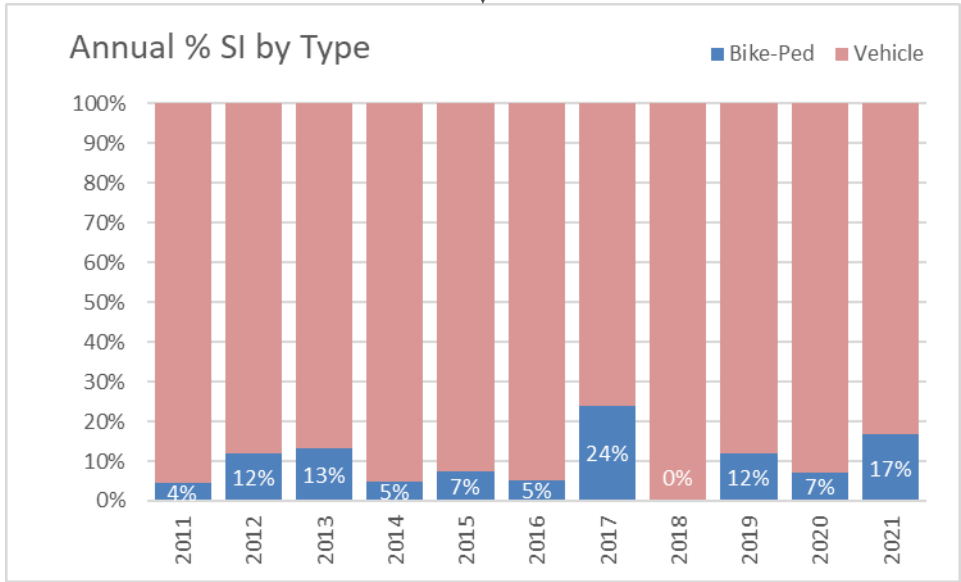
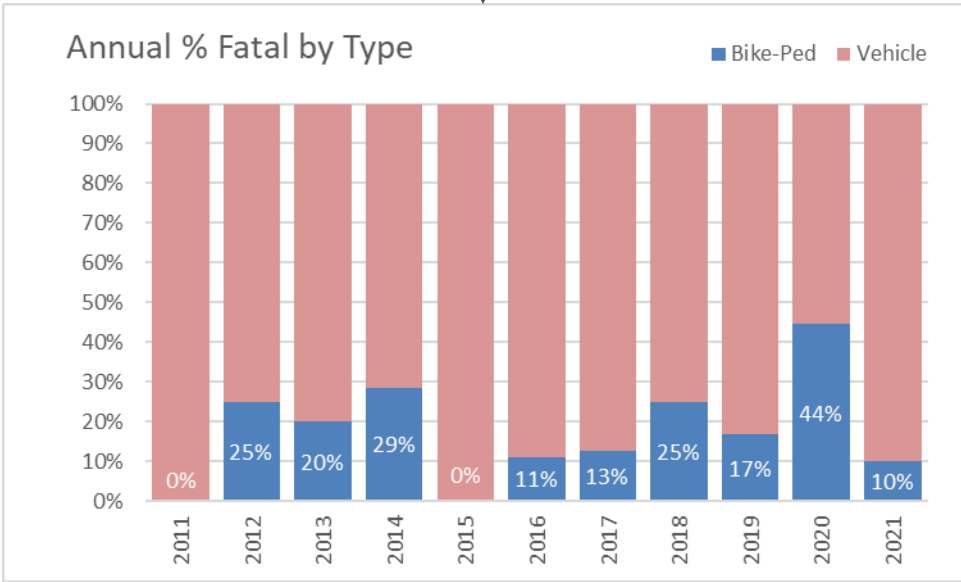
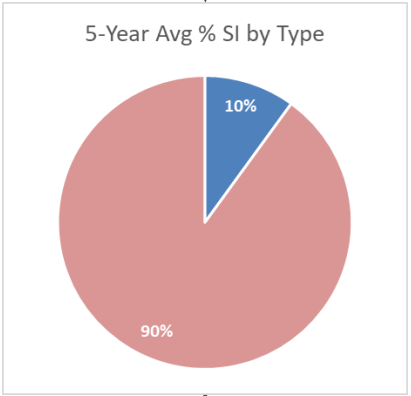
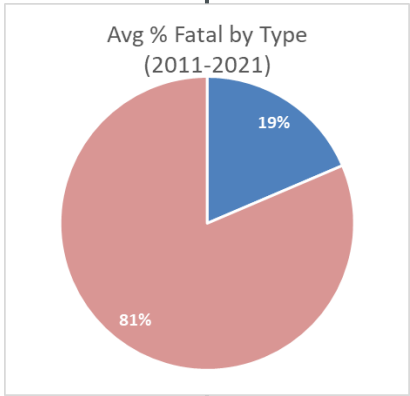
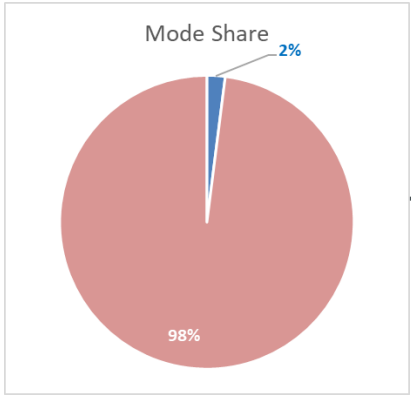
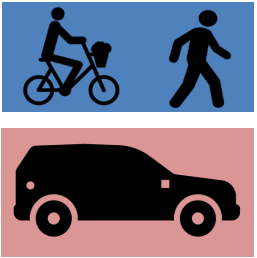
**Rise in Fatalities: 9**

Highest total in 11 years. In 2018 & 2019 there were 4 & 6 respectively. 2021 had 10 fatalities.





# TRENDS & CONCERNS

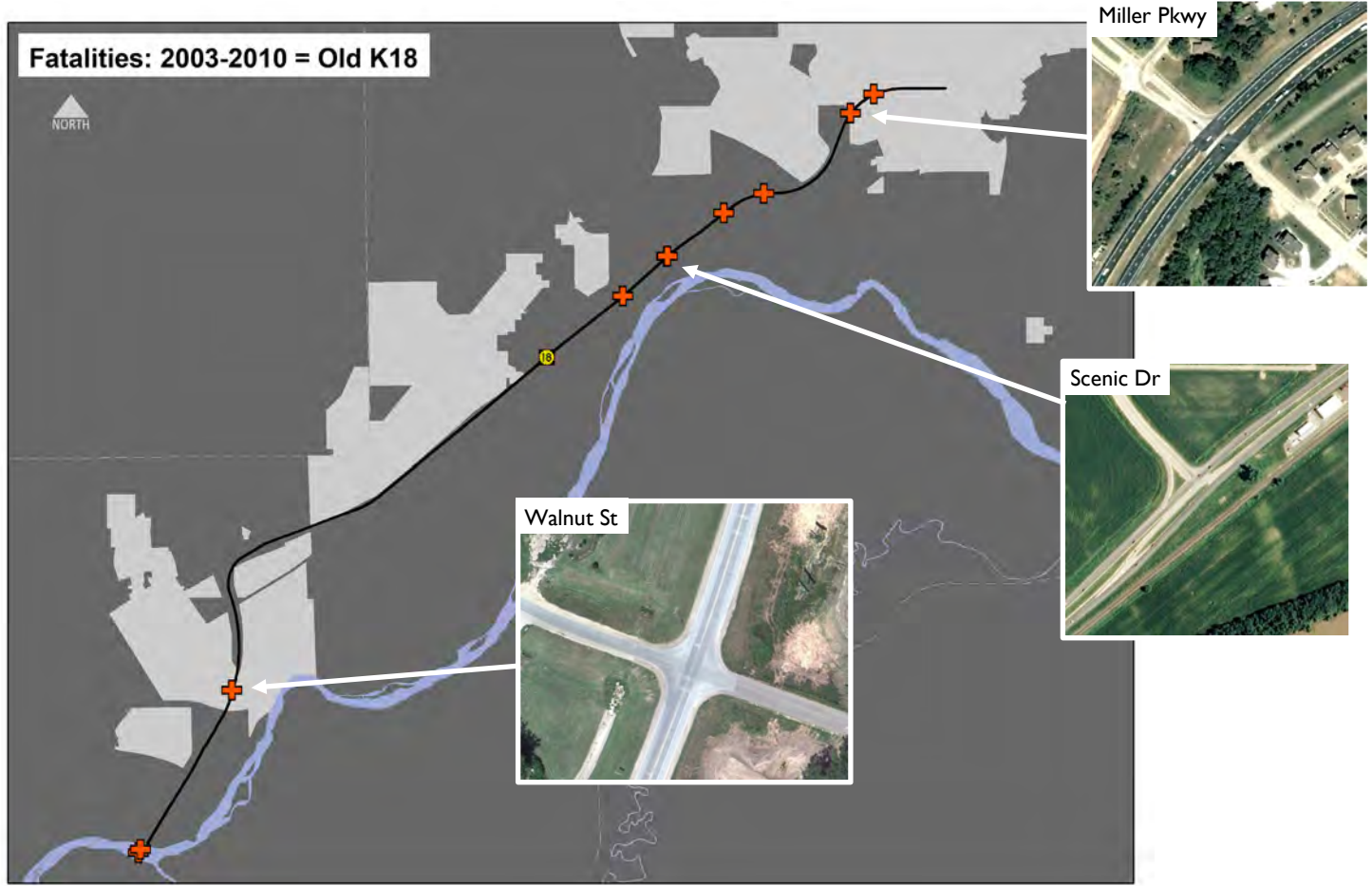


Fatalities  
**13** **57**

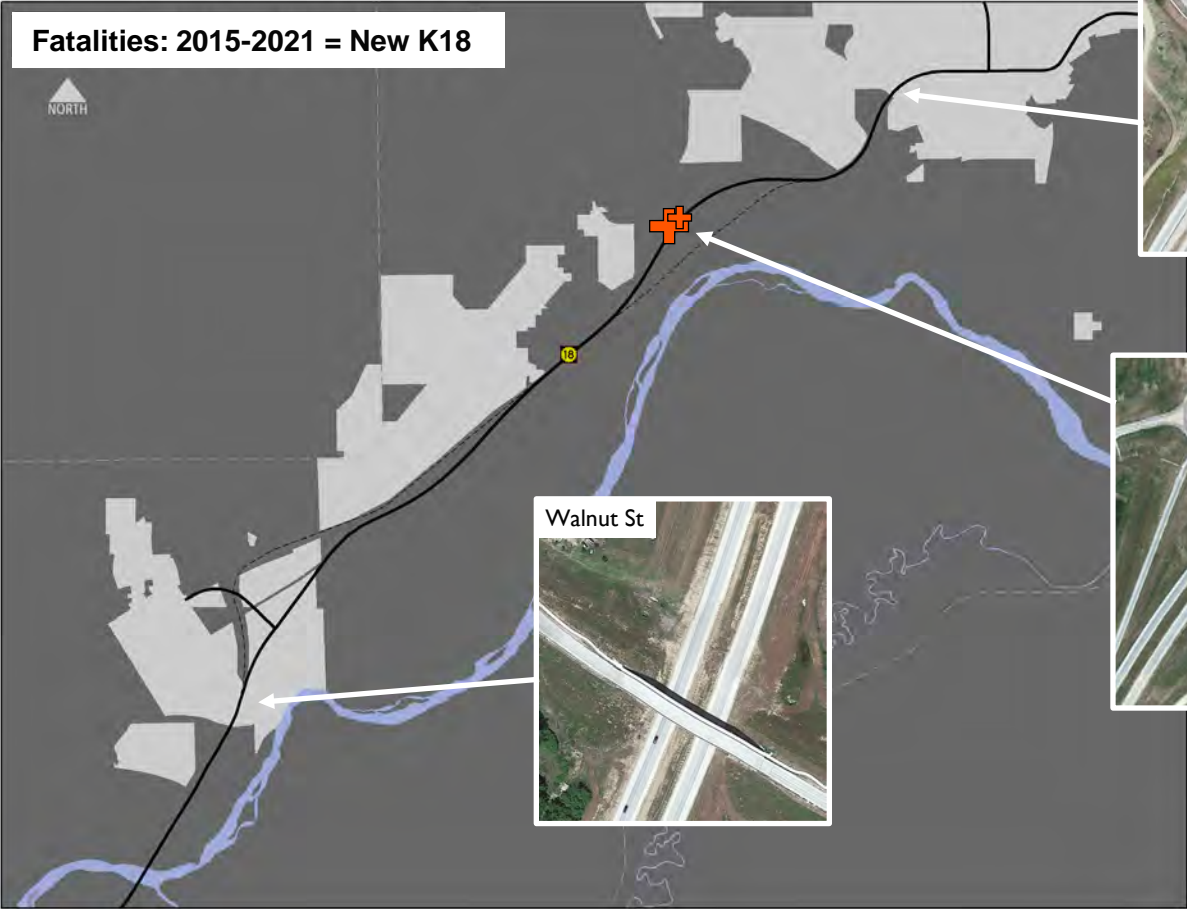
Serious Injuries  
**25** **225**



# K18: BEFORE & AFTER



# K18: BEFORE & AFTER



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Years	Road Type	# of Crashes	Crashes p.Year	# of Fatalities	Fatalities p. Year	# of Serious Injuries	Serious Injuries p.Year
2004-10	4-Lane	<b>676</b>	96.5	<b>9</b>	1.29	<b>40</b>	5.71
2015-21	4-Lane Limited Access	<b>428</b>	61.1	<b>4</b>	0.57	<b>11</b>	1.57

37%  
Reduction

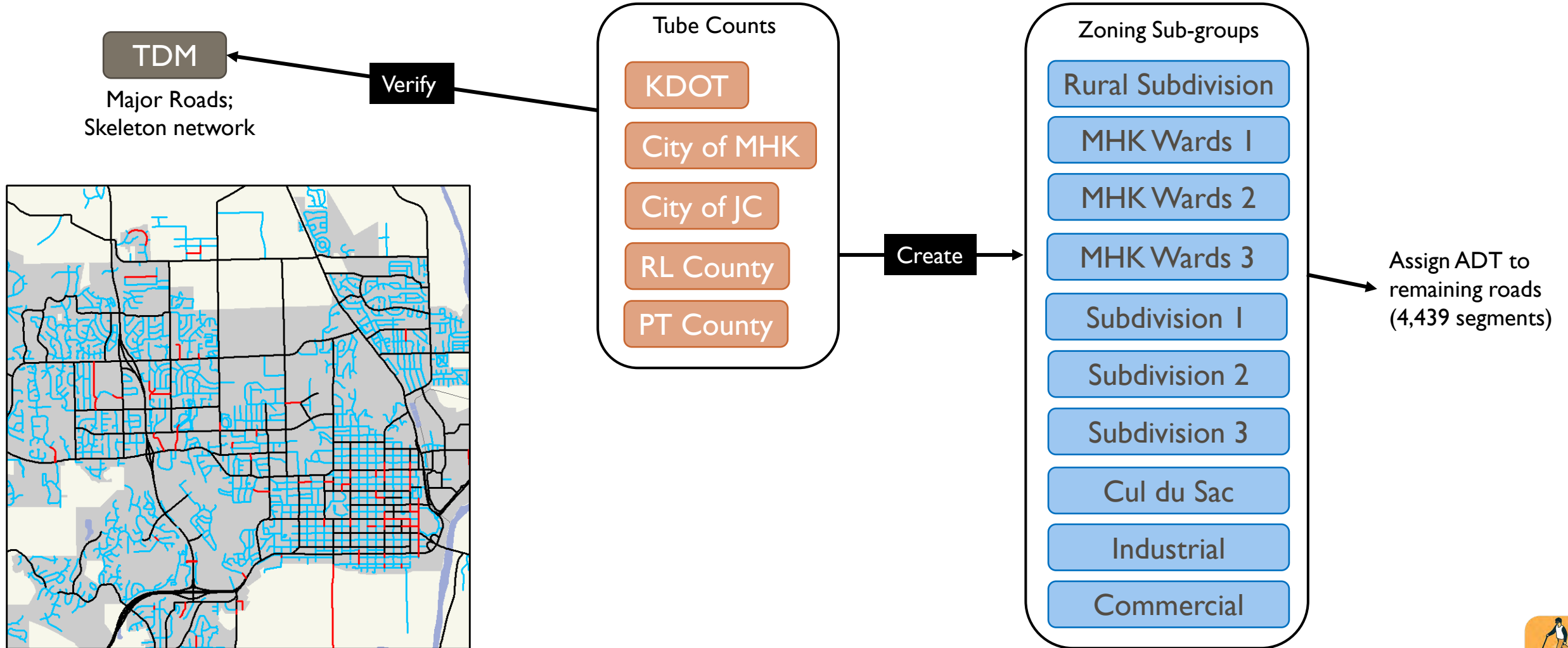
56%  
Reduction

73%  
Reduction

# APPENDIX A

## CALCULATING VMT

### 1. Calculate ADT for all Road Segments



# APPENDIX A

## CALCULATING VMT

2. Calculate VMT from ADT for all Road Segments

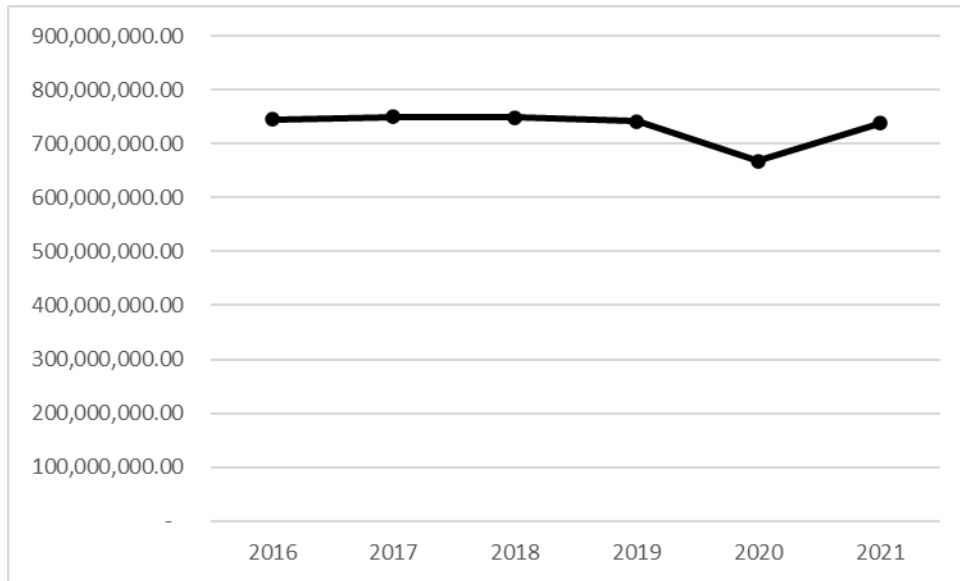
$$\left( \text{Road Length (ft)} \div 5280 \right) \times \text{ADT} = \text{Daily VMT}$$
$$\times 365$$
$$=$$

**Annual VMT**

**2016 VMT: 744,949,486**



**2021 VMT: 738,160,316**



Annual % change based on KDOT data

