



Illinois Department
of Transportation

2023 VRU

VULNERABLE ROAD USER

Safety Assessment



Stakeholder Engagement | June 7th and 8th, 2023

Agenda

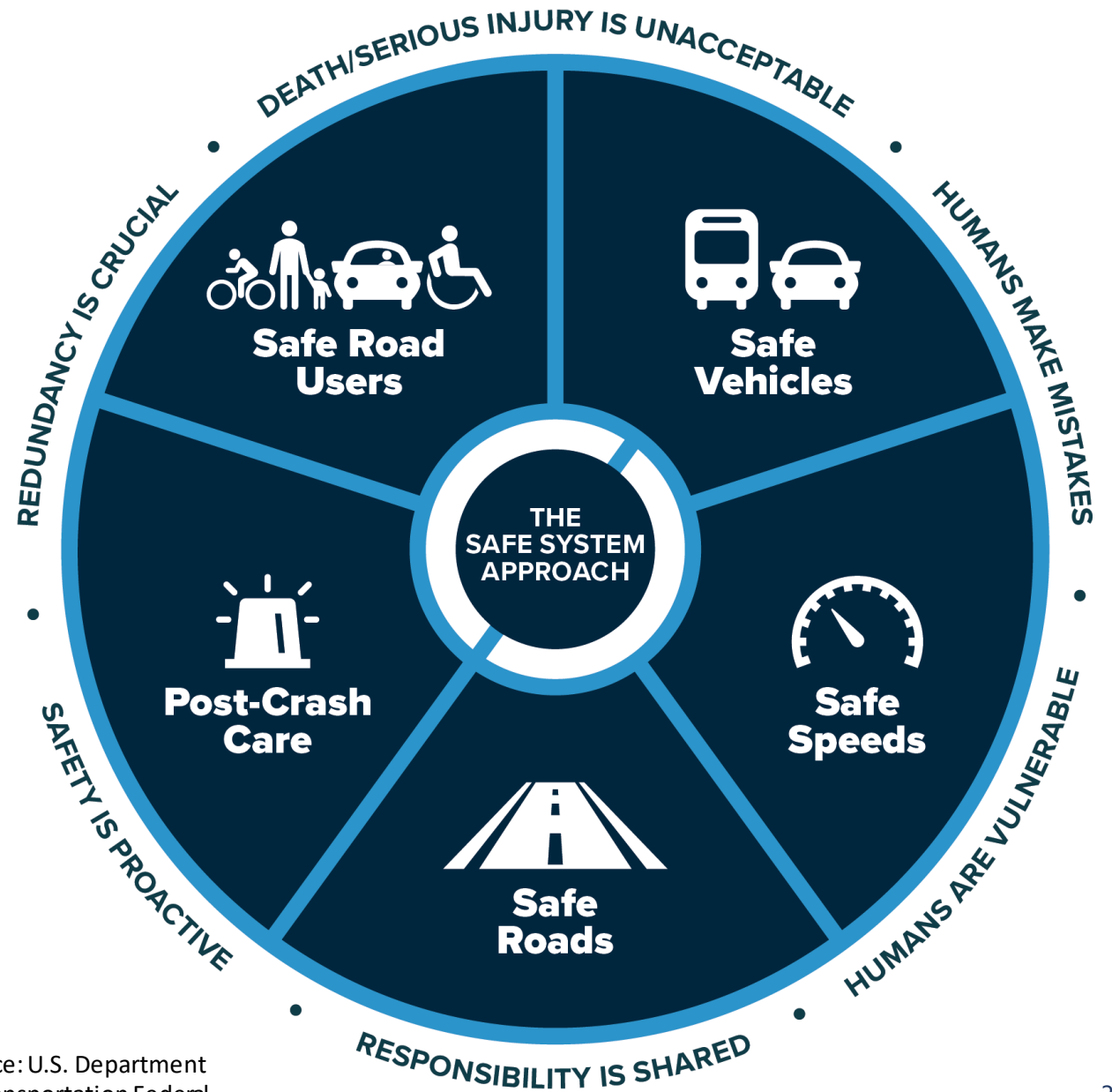
1. Background

2. VRU Safety Assessment Process

3. Initial Findings

4. Input and Insight from Stakeholders

Safe System Approach



What is a Vulnerable Road User (VRU)?

A VRU is a nonmotorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist

A vulnerable road user may include:

- People walking, biking, or rolling
- Includes a highway worker on foot in a work zone, given they are considered a pedestrian
- Does not include a motorcyclist

What is the VRU Safety Assessment?

It is a process to identify safety trends, policies, rules, and procedures pertinent to safe travel by vulnerable road users and identify steps to improve them.

Vulnerable Road User Safety Assessment is required under the Bipartisan Infrastructure Law (BIL) and must be completed by November 15, 2023.



Illinois SHSP

Strategic Highway Safety Plan 2022-2026



*Scan to access the
Illinois SHSP 2022-2026 and
VRU Safety Assessment*



Mission and Vision Statement

Mission: The Illinois Vulnerable Road User Safety Assessment's mission is to engage stakeholders and develop a data-driven process to identify Safe System Approach strategies and programs to reduce vulnerable user's traffic-related deaths and life-altering injuries on all public roads, with a deliberate and proactive focus on underserved communities in Illinois.

Vision: We envision a future where no one loses their life while biking, walking, and rolling so that we can achieve the goal of zero fatalities and serious injuries on public roadways in Illinois.

Components of the VRU Safety Assessment

- 1 Overview of Vulnerable Road User Safety Performance
- 2 Quantitative Analysis
- 3 Stakeholder Consultation
- 4 Identification Program of Projects or Strategies
- 5 Consideration Safe System Approach

Not Part of the VRU Safety Assessment

- 1 Implementation plan or strategic plan
- 2 Identifying gaps in the bike / ped network system
- 3 Developing policy
- 4 Eligibility of funding

On-going Initiatives in Illinois



**LOCAL ROAD
SAFETY PLANS/SAFETY
ACTION PLANS**



**ACTIVE
TRANSPORTATION PLAN**



**HIGHWAY SAFETY
IMPROVEMENT PROGRAM
(HSIP)**

Equity Analysis

Purpose of Equity Analysis:

Many communities rely on multiple modes to connect to basic services that are necessary to live productive, fulfilling, and healthy lives.

The Equity Analysis will identify communities that have been **historically disadvantaged** or are otherwise considered vulnerable to unsafe, disconnected, or incomplete active transportation networks.

Common Equity Indicators



Income



Youth & Seniors



Economic Opportunity



Race



Housing Cost Burden



Educational Attainment



Access to a Vehicle



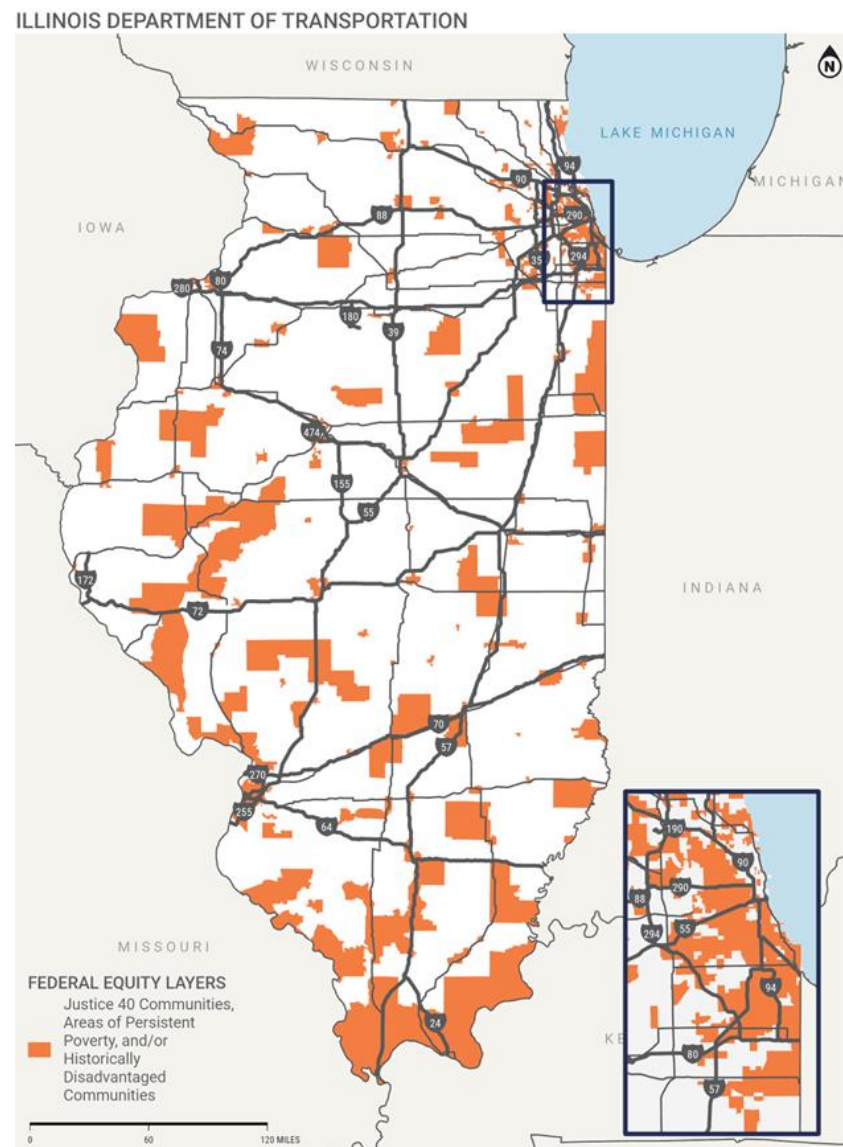
Air Quality

The Equity Analysis builds upon the Federal funding priority zones:

- Justice 40
- Areas of Persistent Poverty
- Historically Disadvantaged Communities

This plan's analysis will provide a focused assessment of equity in terms of serving **active transportation needs**.

Federal Funding Considerations

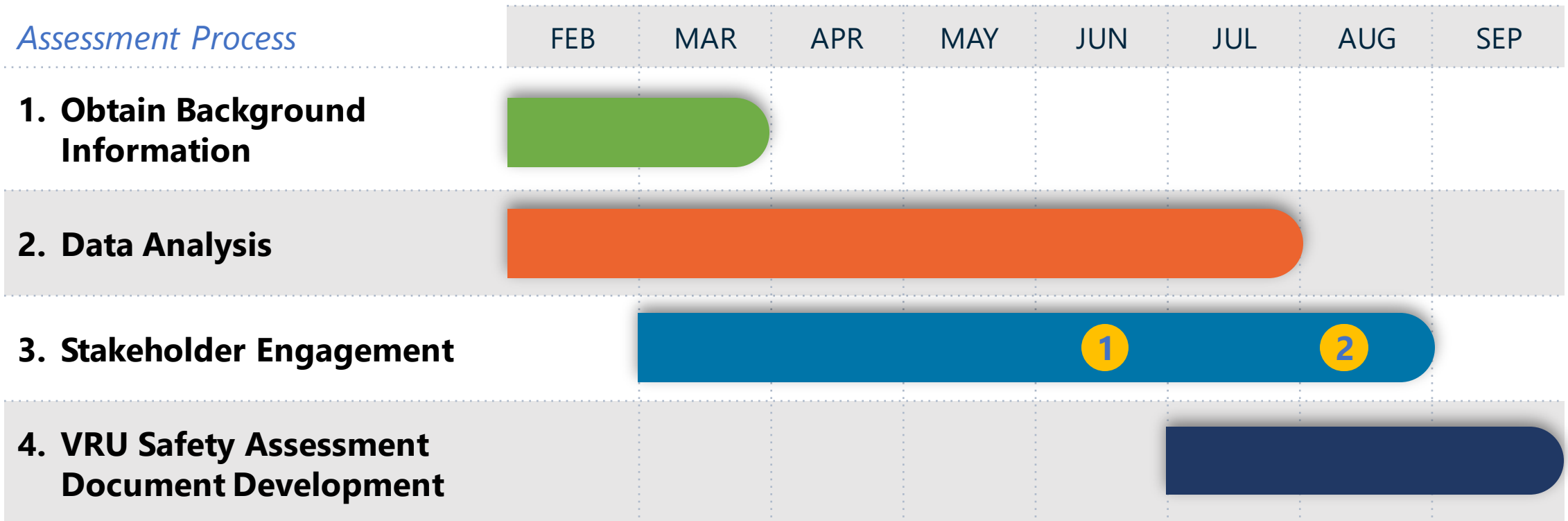


Use of the Equity Analysis

- Targeted engagement
- Gap analysis
- Potentially for project prioritization

Illinois VRU Safety Assessment Process

2023

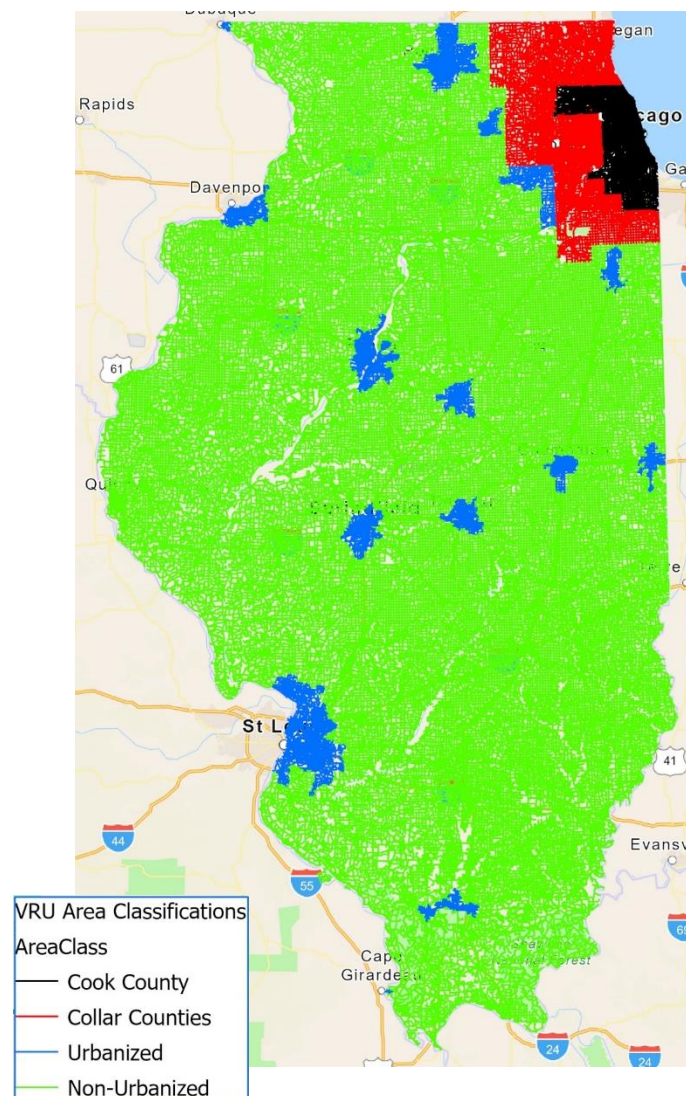
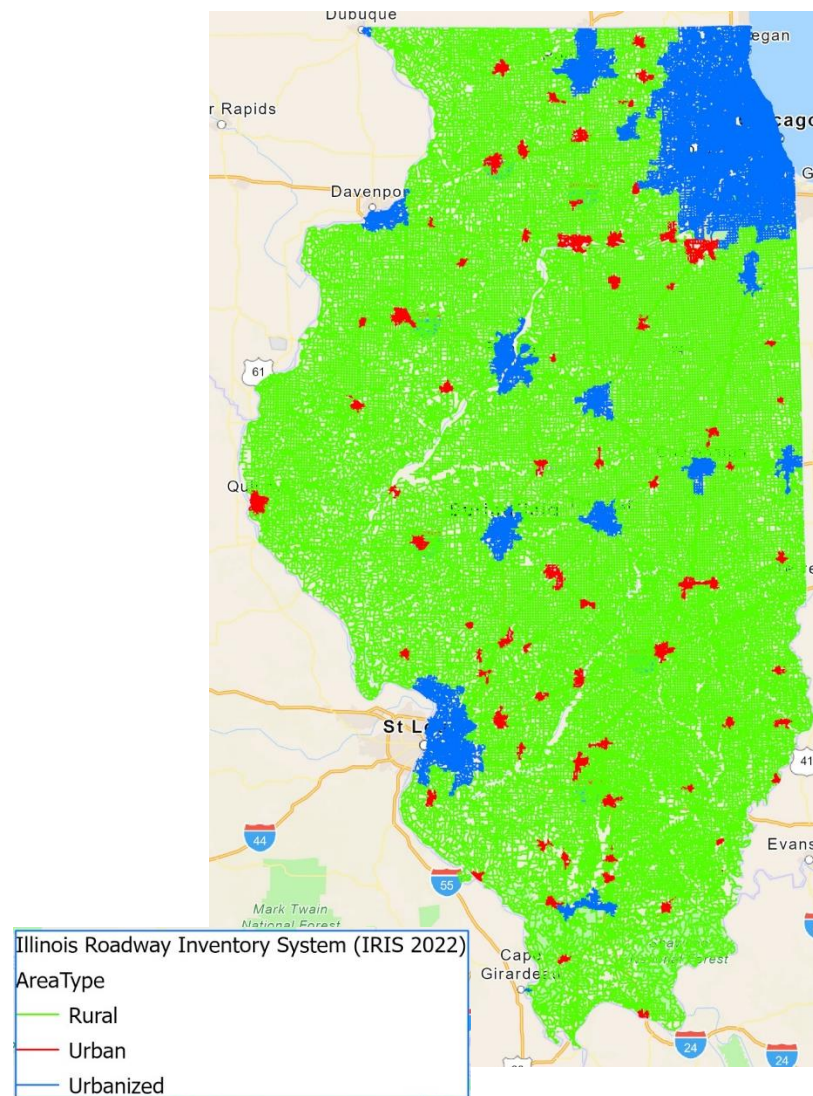


Stakeholder Engagement

- **Overview Webinar**
- **Website for Online Input**
- **Detailed Virtual Engagement**
 - 1 ***Multidisciplinary Stakeholder Focused Series 1:*** Review data analysis, identification of needs and strategies, current and on-going initiatives – **Today**
 - 2 ***Roadway Owner Focused Series 2:*** Review and obtain input on suggested projects including locations and strategies

Traffic Safety Concerns Shared During the Active Transportation Plan (ATP) Meetings

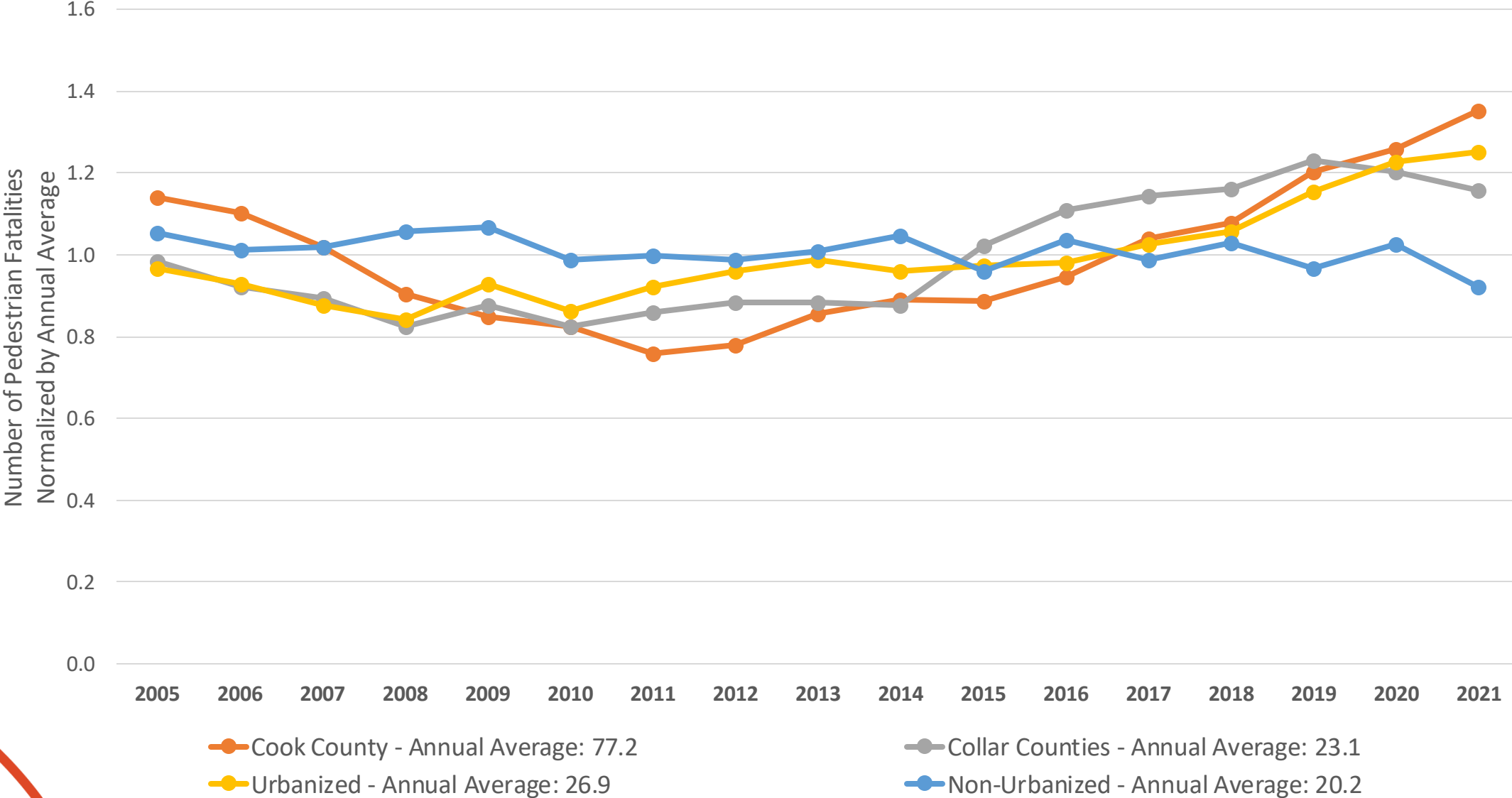




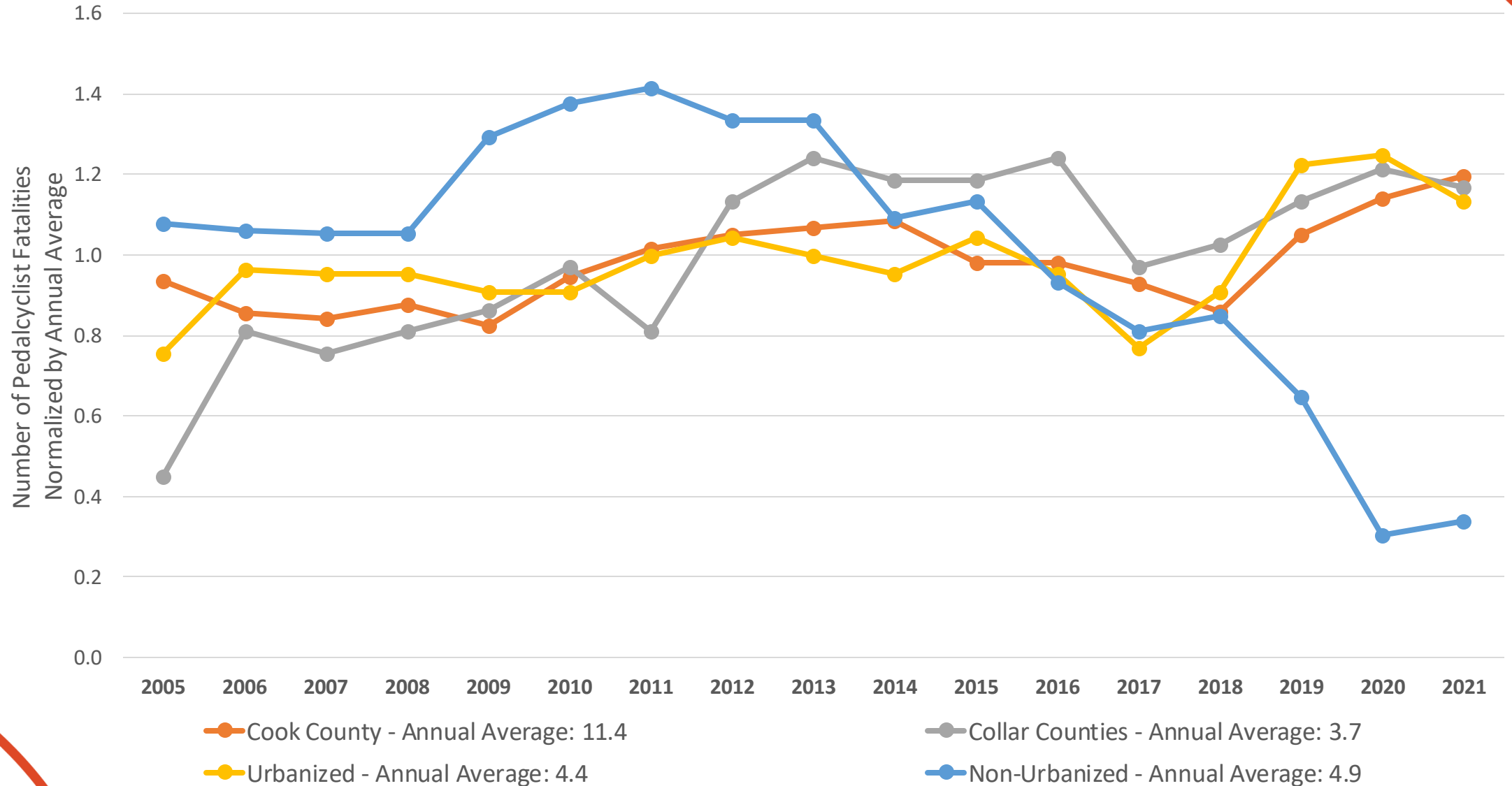
Annual Average Number of VRUs

	Annual Average Number of VRUs by Person Type and Severity 2005-2021										
	Pedestrian					Pedalcyclists					Total
	K	A	B	C	O	K	A	B	C	O	
Cook County	77.2	655.2	1,949	1,081.2	120.6	11.4	224.5	1,128.4	619.4	118.1	5,985
Collar Counties	23.1	128.9	227.8	116.6	14.5	3.7	68.4	258.3	116.4	18.7	976.4
Urbanized	26.9	127.8	223.6	118.7	17.3	4.4	61.4	209.6	97.1	19.5	906.3
Non-Urbanized	20.2	64.8	94.6	40.5	8.9	4.9	38.2	96.9	39.4	9.4	417.8
Total	147.4	976.7	2,495	1,357	161.3	24.4	392.5	1,693.2	872.3	165.7	8,285.5

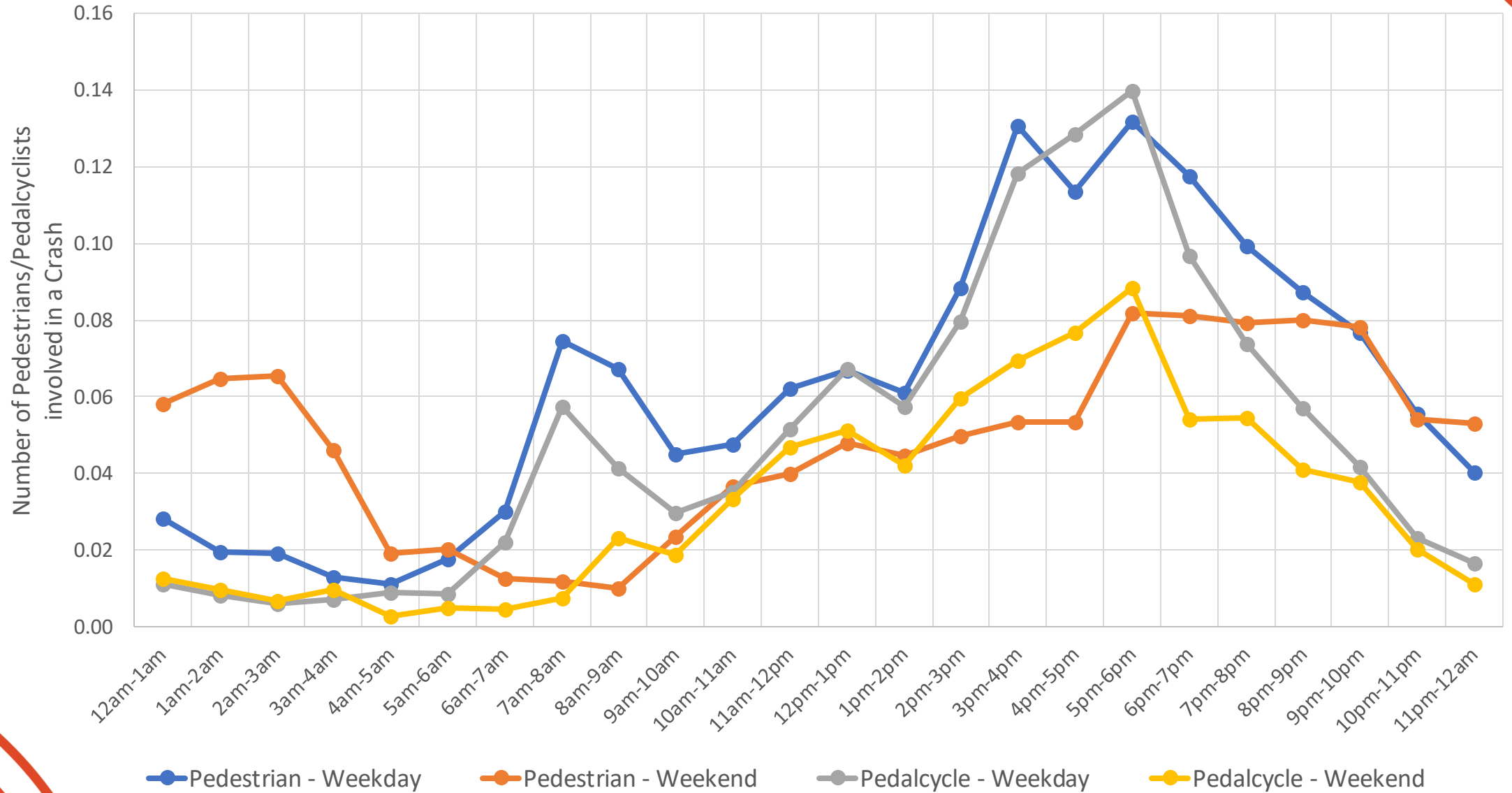
Annual Trend of Pedestrian Fatalities – 5-Year Centered Rolling Average



Annual Trend of Pedalcyclists Fatalities – 5 Year Centered Rolling Average

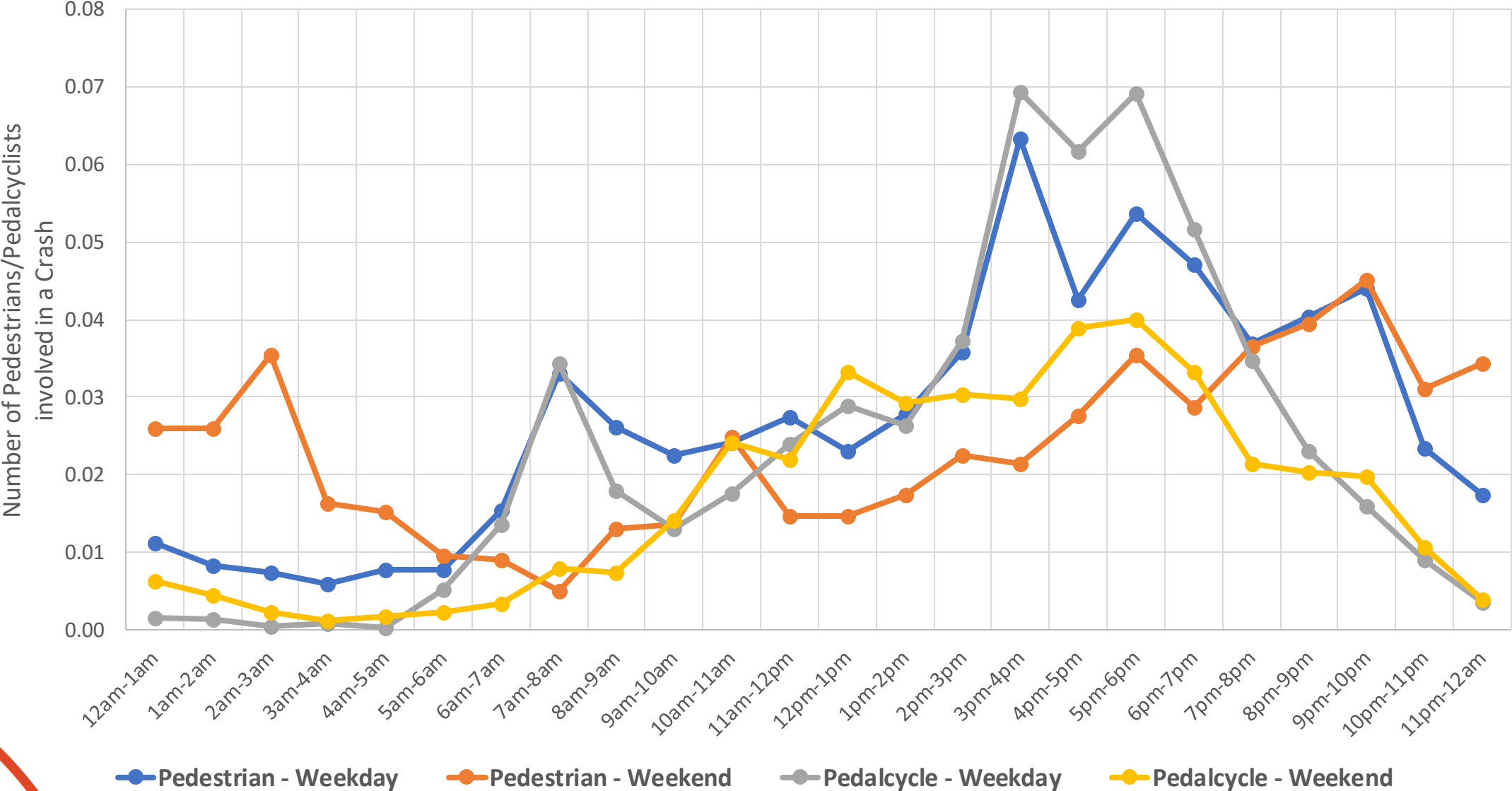


Average Hourly Trend - Urbanized Areas - 2005-2021



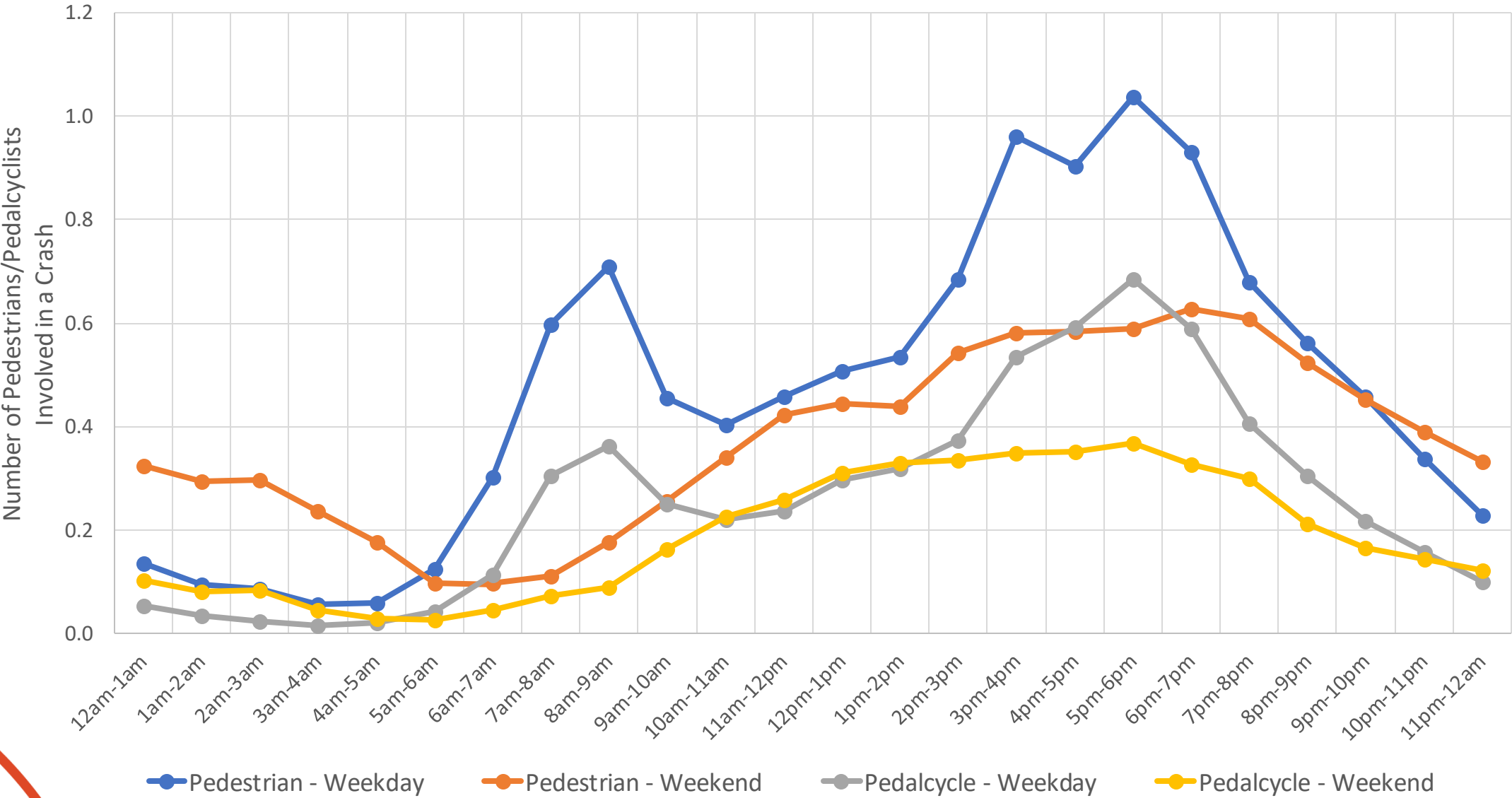
Urbanized Areas		Pedestrian Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
Vehicle Maneuver Prior To Crash	Going Straight	1.72	16.3	8.28	6.97	2.83	1.63	1.58	0.27	2.51	15.64	57.73
	Turning	0.71	2.69	10.73	0.91	0.8	0.14	0.55	0.06	0.26	5.17	22.02
	Lane Change	0.07	1.06	0.14	0.26	0.07	0.14	0.05	0.04	0.06	0.61	2.5
	Parking Related	0.01	0.18	0.11	0.06	0.01	0.01	0.01	0.02	0.02	0.37	0.8
	Backing	0.22	1.2	0.11	0.23	0.02	0.16	0.04	0.01	0.07	1.64	3.7
	Control Loss	0.14	0.37	0.07	0.06	0.04	0.13	0.04	0.01	0.04	0.48	1.38
	Wrong Way	0	0.07	0	0.01	0	0.02	0.01	0	0.01	0.07	0.19
	Other	0.07	0.24	0.04	0.07	0.05	0.08	0.01	0	0	0.48	1.04
	Unknown	0.43	2.22	0.56	0.26	0.23	0.14	0.08	0.01	0.33	2.15	6.41
	Total	3.37	24.33	20.04	8.83	4.05	2.45	2.37	0.42	3.3	26.61	
		Pedalcyclist Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
	Going Straight	1.71	16.21	10.84	2.12	1.67	0.47	8.34	0.08	0.79	14.14	56.37
	Turning	1.46	10.35	8.91	0.5	0.91	0.11	1.53	0.03	0.23	7.84	31.87
	Lane Change	0.11	0.88	0.09	0.08	0.05	0.03	0.38	0	0	0.41	2.03
	Parking Related	0.17	0.32	0.05	0	0.02	0.05	0.05	0	0.02	0.29	0.97
	Backing	0.08	0.38	0.02	0.08	0.03	0	0.05	0	0	0.33	0.97
	Control Loss	0.03	0.17	0.09	0	0	0	0.05	0	0	0.11	0.45
	Wrong Way	0.03	0.02	0	0	0	0	0.02	0	0	0.02	0.09
	Other	0.05	0.14	0.02	0	0.02	0.02	0.03	0	0	0.33	0.61
	Unknown	0.27	1.49	0.44	0.05	0.06	0	0.23	0	0.12	1.2	3.86
	Total	3.91	29.96	20.46	2.83	2.76	0.68	10.68	0.11	1.16	24.67	

Average Hourly Trend - Non-Urbanized Areas - 2005-2021



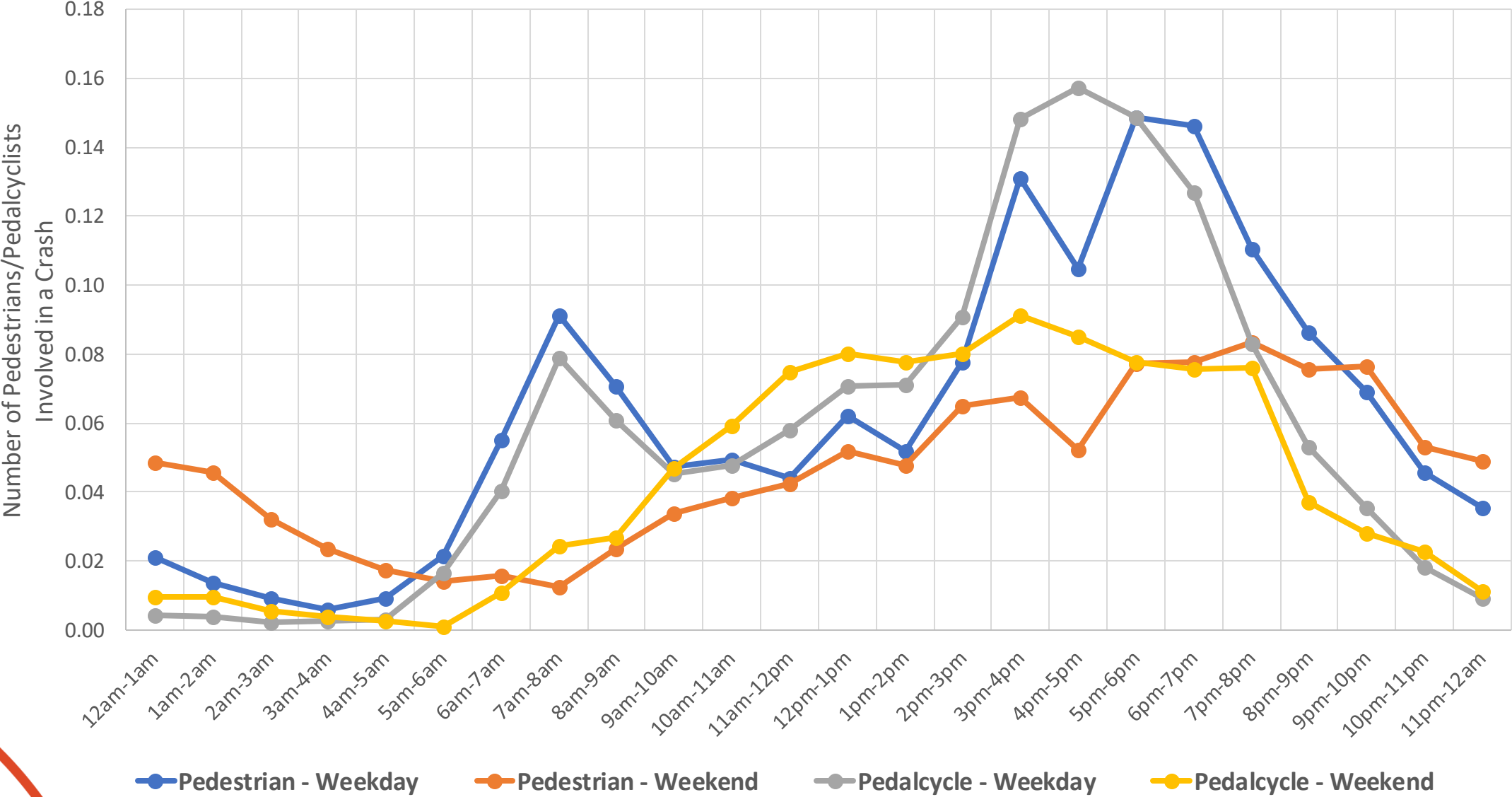
Non-Urbanized		Pedestrian Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
Vehicle Maneuver Prior To Crash	Going Straight	1.74	21.42	3.66	6.34	1.07	2.19	1.74	0.21	2.81	17.81	58.99
	Turning	0.75	2.57	6.18	0.53	0.43	0.13	0.35	0.05	0.11	4.87	15.97
	Lane Change	0.05	1.76	0.03	0.19	0.05	0.37	0	0.05	0.16	0.86	3.52
	Parking Related	0.13	0.35	0.05	0.08	0	0.11	0.05	0	0	0.43	1.2
	Backing	0.35	2.03	0.03	0.45	0.05	0.35	0.08	0	0.11	2.35	5.8
	Control Loss	0.32	0.67	0.05	0	0.03	0.16	0.03	0	0.03	0.83	2.12
	Wrong Way	0.03	0.13	0	0	0	0	0	0	0	0.08	0.24
	Other	0.16	0.59	0	0.03	0.03	0.16	0	0	0.03	0.64	1.64
	Unknown	0.21	2.3	0.21	0.24	0.05	0.16	0.11	0	0.13	1.76	5.17
	Total	3.74	31.82	10.21	7.86	1.71	3.63	2.36	0.31	3.38	29.63	
		Pedalcyclist Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
	Going Straight	1.89	21.19	8.8	1.92	0.82	0.41	10.94	0.03	0.66	16.46	63.12
	Turning	1.26	6.87	4.7	0.41	0.54	0.09	1.55	0.09	0.13	6.21	21.85
	Lane Change	0.25	2.18	0.06	0.06	0.03	0.06	0.91	0	0.03	0.63	4.21
	Parking Related	0.06	0.38	0.13	0.03	0.03	0	0.03	0	0	0.09	0.75
	Backing	0.13	0.73	0.03	0.03	0	0	0	0	0	0.6	1.52
	Control Loss	0.03	0.41	0	0.03	0	0	0.03	0	0.03	0.09	0.62
	Wrong Way	0	0.09	0	0	0	0	0.03	0	0	0.06	0.18
	Other	0.03	0.22	0	0	0	0	0	0	0	0.25	0.5
	Unknown	0.25	1.14	0.32	0.13	0.06	0.03	0.09	0	0.09	1.32	3.43
	Total	3.9	33.21	14.04	2.61	1.48	0.59	13.58	0.12	0.94	25.71	

Average Hourly Trend - Cook County - 2005-2021



Cook County		Pedestrian Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
Vehicle Maneuver Prior To Crash	Going Straight	1.05	10.35	10.95	4.25	2.3	1.08	0.69	0.13	0.82	15.66	47.28
	Turning	0.55	3.83	16.8	0.71	0.97	0.11	0.49	0.05	0.1	6.64	30.25
	Lane Change	0.09	0.62	0.38	0.21	0.11	0.09	0.03	0.02	0.04	0.7	2.29
	Parking Related	0.04	0.34	0.34	0.05	0.01	0.06	0.04	0	0.01	0.57	1.46
	Backing	0.23	0.96	0.43	0.36	0.12	0.13	0.08	0.01	0.02	1.86	4.2
	Control Loss	0.06	0.14	0.12	0.02	0.01	0.03	0.01	0	0.01	0.31	0.71
	Wrong Way	0.02	0.07	0.03	0.01	0	0.02	0	0	0	0.09	0.24
	Other	0.08	0.31	0.19	0.05	0.03	0.04	0.01	0	0.03	0.87	1.61
	Unknown	0.19	1.18	1.16	0.26	0.28	0.13	0.08	0.01	0.13	3.84	7.26
	Total	2.31	17.8	30.4	5.92	3.83	1.69	1.43	0.22	1.16	30.54	
		Pedalcyclist Action Prior To Crash										
		No Action	Walk/Ride Along Road	Crossing - Signal	Crossing - MidBlock	Crossing - Stop-Controlled Intersection	Parked Vehicle	Turning	School Bus	Impaired	Other	Total
	Going Straight	1.34	16.07	9.21	1.05	1.46	0.21	5.15	0.03	0.28	12.24	47.04
	Turning	1.35	15.4	9.31	0.35	0.81	0.1	1.63	0.04	0.08	7.69	36.76
	Lane Change	0.16	1.97	0.19	0.06	0.04	0.01	0.16	0	0.02	0.5	3.11
	Parking Related	0.12	1.69	0.09	0.02	0.01	0.01	0.05	0	0.01	0.41	2.41
	Backing	0.09	0.46	0.04	0.03	0.01	0.01	0.03	0	0	0.33	1
	Control Loss	0.02	0.13	0.07	0	0	0	0.03	0	0	0.08	0.33
	Wrong Way	0.01	0.1	0.01	0	0	0	0.01	0	0	0.02	0.15
	Other	0.09	1.01	0.1	0.01	0.02	0.01	0.03	0	0.01	0.59	1.87
	Unknown	0.2	1.78	0.42	0.06	0.12	0.02	0.19	0	0.05	2.21	5.05
	Total	3.38	38.61	19.44	1.58	2.47	0.37	7.28	0.07	0.45	24.07	

Average Hourly Trend - Collar Counties - 2005-2021



VRU Safety Webmap

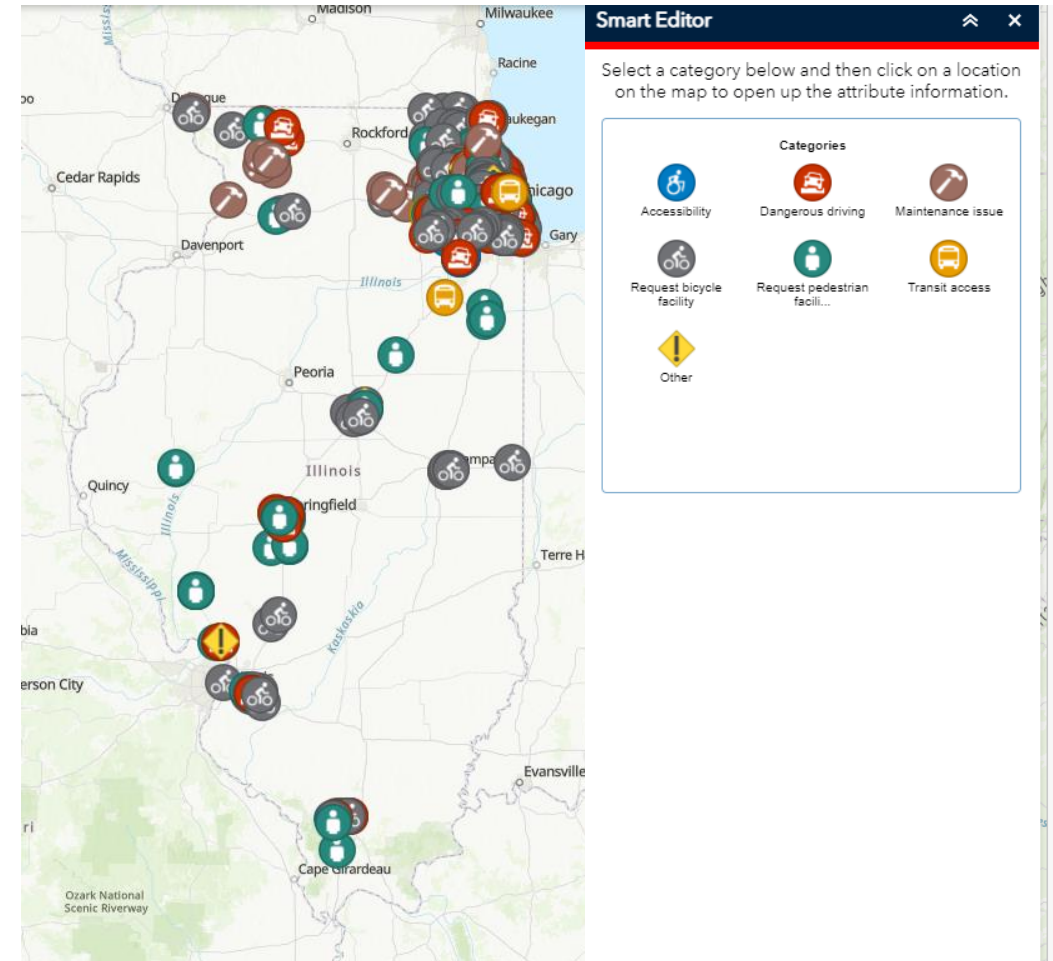
Provides an opportunity for public comments on potential roadway safety concerns for VRUs.

Try it out now!

Enter data by June 30th.

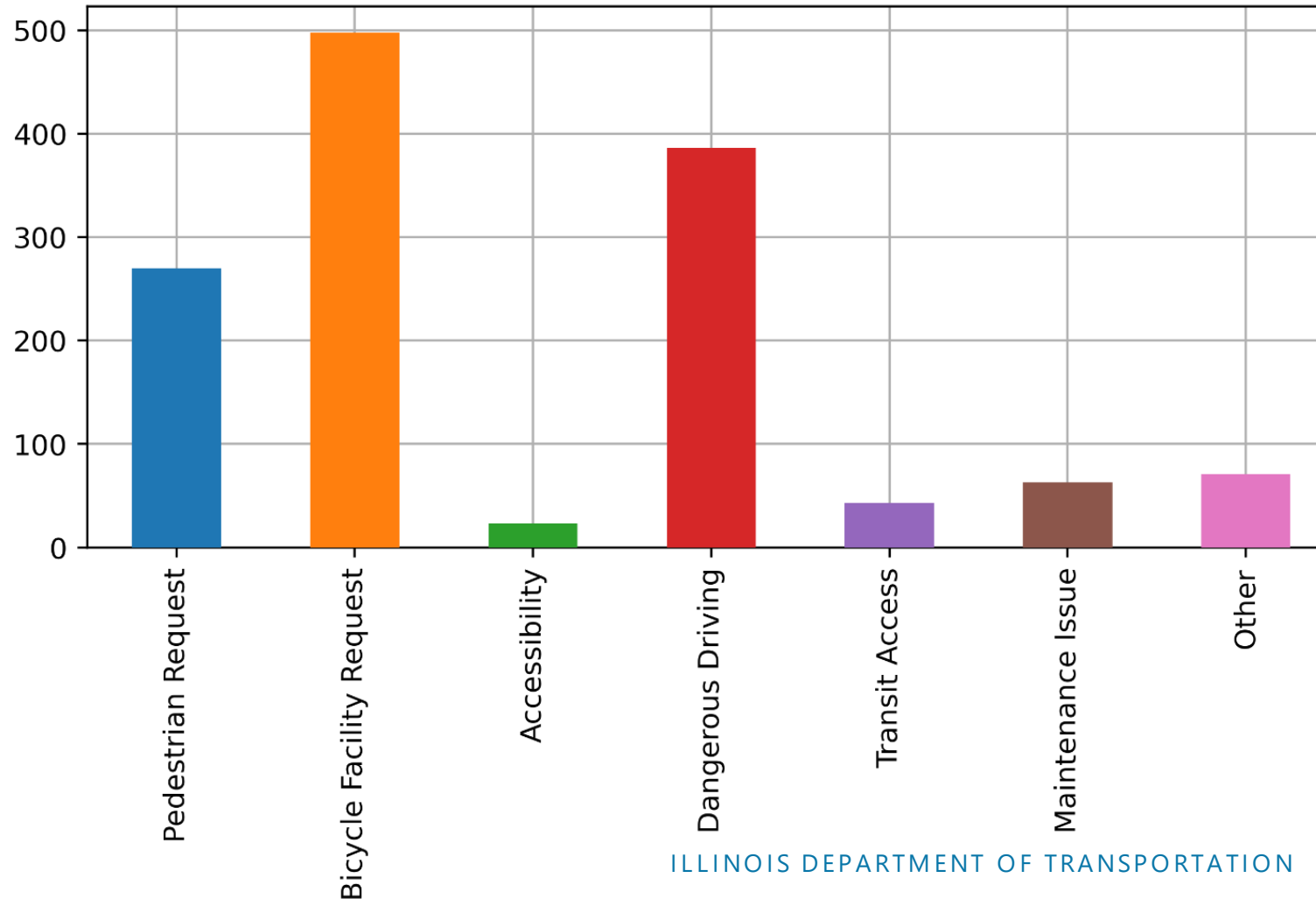


www.tinyurl.com/ILLINOISVRUTOOL



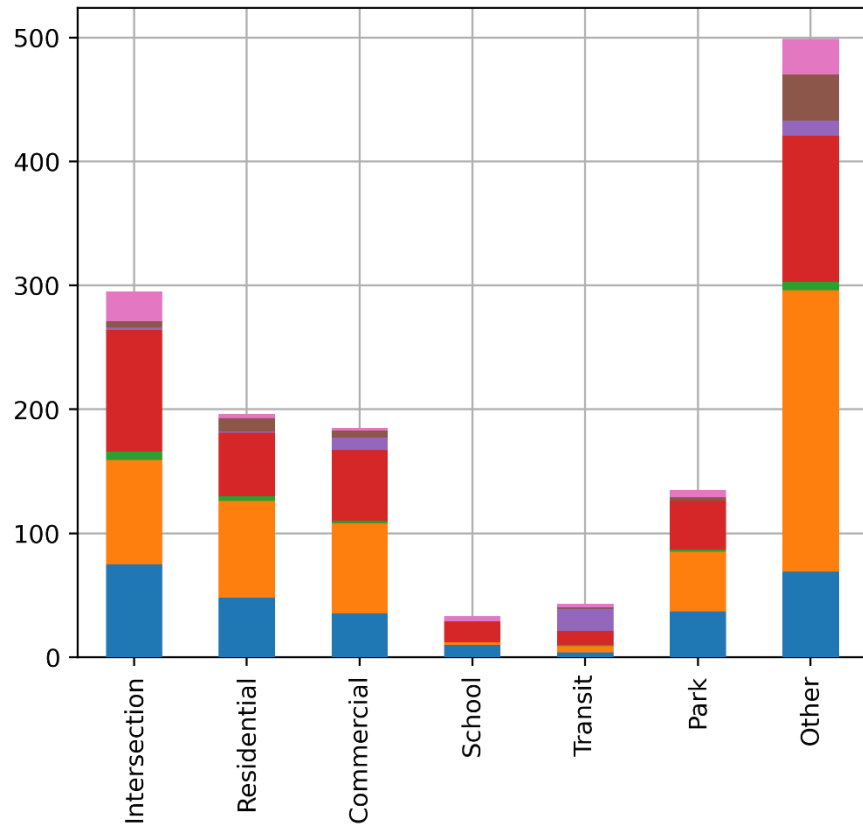
VRU Safety Webmap Insights

Number of Entries by Category

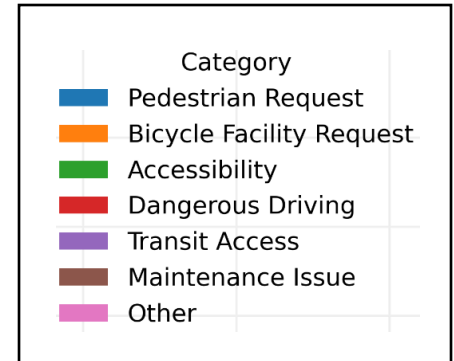
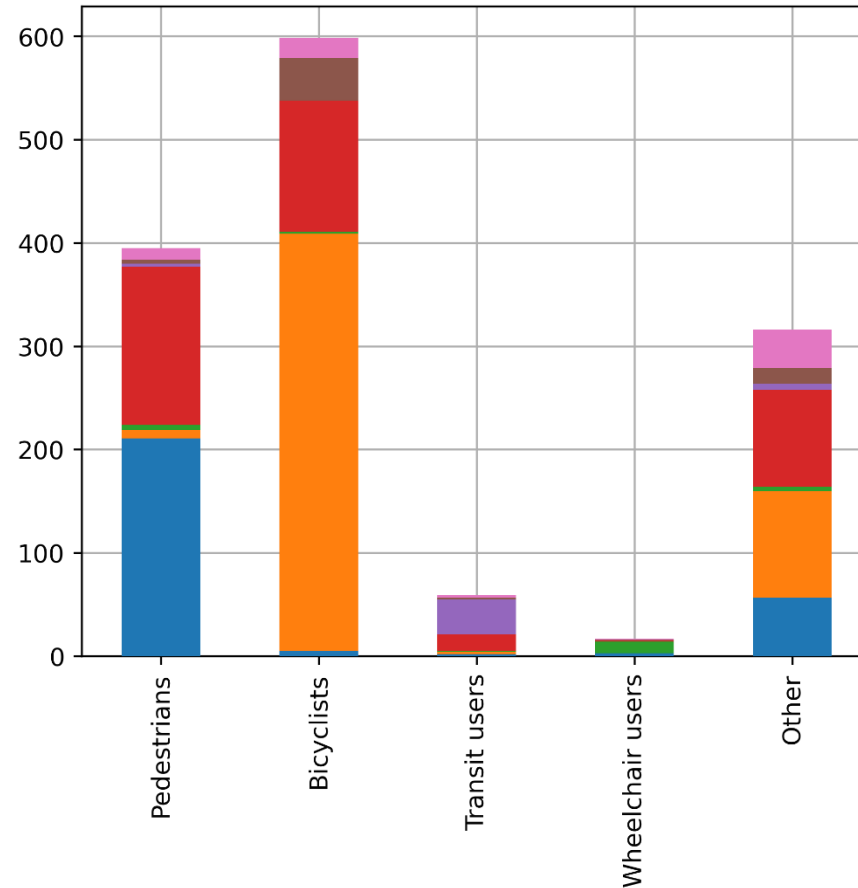


VRU Safety Webmap Insights

Category by Location Type



Category by Users Affected



Quantitative Analysis Approach

- **Modern research**

- Systemic analysis
- Crash prediction
- Innovations across the country

- **Data-driven**

- Crashes, network inventory
- Census, disadvantaged communities (Justice40)
- Engineered data (intersection density, walkability)
- Community-sourced geocoded commenting

- **Technology-enabled**

- Web-mapping and visualization
- Automate complex analysis scenarios
- Machine-learning methods



Data Needs

1. VRU infrastructure data

2. VRU exposure data

3. On-going initiatives and projects

4. Treatments and countermeasures

If you have data,
please send it to

[DOT.VRUSafety@](mailto:DOT.VRUSafety@illinois.gov)
[illinois.gov](mailto:DOT.VRUSafety@illinois.gov)

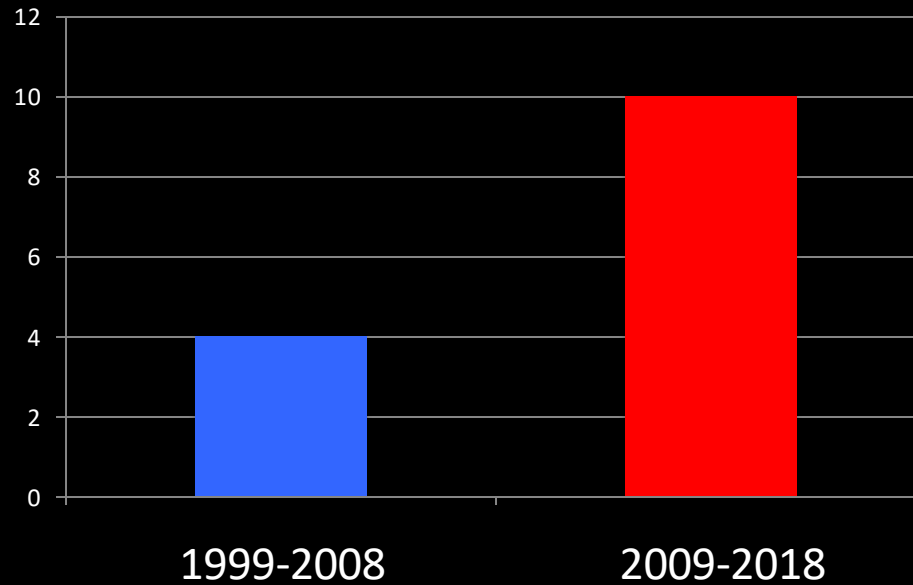
by June 30th.

Stakeholder Perspective

Urbanized Areas

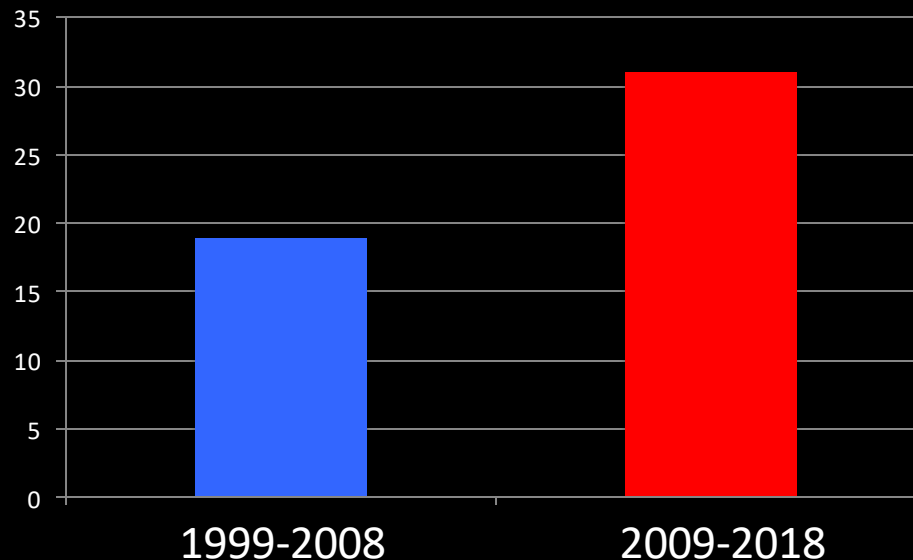
- **Audrey Ishii**
 - Vice Chair, Urbana Bicycle and Pedestrian Advisory Commission
- **Stephen Letsky**
 - Project Development Engineer, IDOT Bureau of Locals Roads & Streets
- **Dave Simmons**
 - Executive Director, Ride Illinois
- **Gabriel Lewis**
 - Planner III, Champaign County Regional Planning

In Champaign County over 10 years:



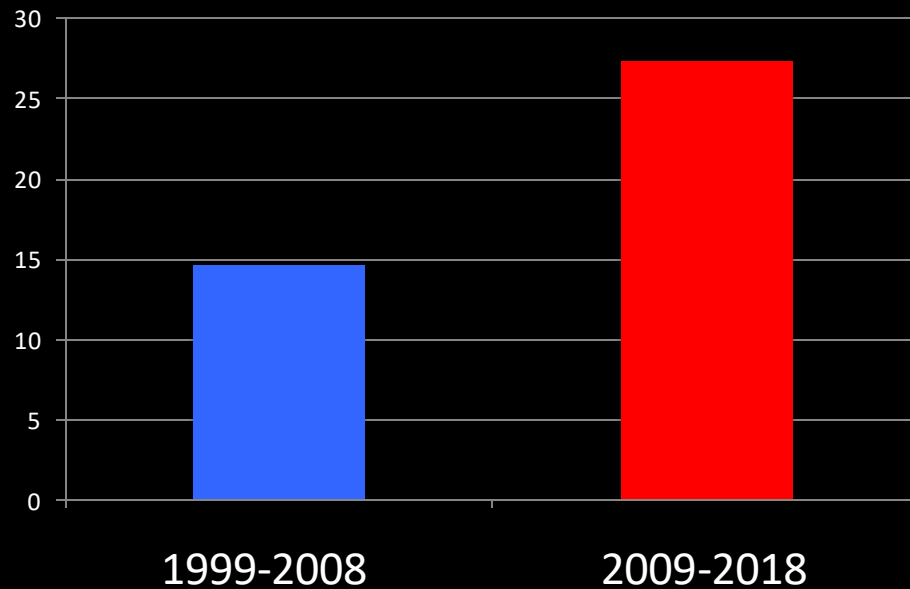
Bicycle deaths have increased 150%

Pedestrian deaths have increased 63%



(Population up about 10%) <https://data.ccrpc.org/dataset/traffic-crashes>

Not acceptable in our County!

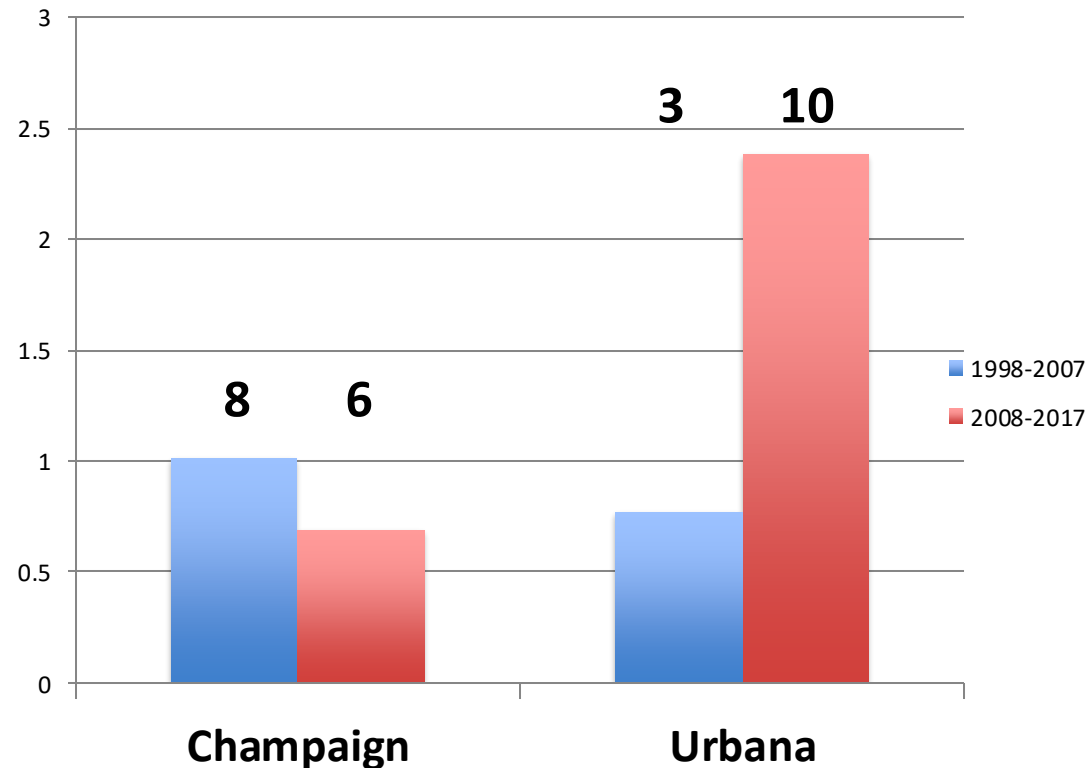


The percent of all local traffic deaths that are pedestrian or bicyclist has almost **doubled**, from 14.6% to 27.3%.

Nationally, almost 1 in 5 traffic deaths are now pedestrian or bicyclist.

AVERAGE PEDESTRIAN DEATH RATES for 10-YEAR PERIODS

Average annual deaths per 100,000 people plotted
Total 10 year crash deaths are listed above each bar.



Percent change is based on the average annual per 100,000

For the 2008-2017 (10 years, red bar) period, pedestrians were 19 % of Champaign traffic deaths (6 of 32) and 48 % of Urbana traffic deaths (10 of 21). In the same period, there were 2 cyclists killed in Champaign (2011,2012), 1 in Urbana (2009).

In Urbana, one pedestrian death per year is a fatality rate per 100,000 of Urbana **(2.5)** NY **(1.09)**, Chicago **(2.02)**, Boston **(0.58)**, Seattle **(1.56)**, Denver **(2.4)**, Champaign **(1.13)**.

State rates:
Illinois **(1.40)**
#20 lowest
Texas (2.34)
Tenn. (2.50)
#39&40 lowest

Total and Pedestrian Fatalities in Cities With Populations of 500,000 or Greater, and Fatality Rates, 2020

City	Total Fatalities	Pedestrian Fatalities		Population	Fatality Rate per 100,000 Population	
		Number	Percentage of Total Fatalities		Total	Pedestrian
Indianapolis, IN	134	39	29.1%	877,903	15.26	4.44
San Francisco, CA	31	12	38.7%	866,606	3.58	1.38
Seattle, WA	26	12	46.2%	769,714	3.38	1.56
Denver, CO	51	15	29.4%	735,538	6.93	2.04
Washington, DC	36	10	27.8%	712,816	5.05	1.40
Boston, MA	18	4	22.2%	691,531	2.60	0.58
El Paso, TX	64	12	18.8%	681,534	9.39	1.76
Nashville, TN	104	37	35.6%	671,295	15.49	5.51
Detroit, MI	191	41	21.5%	665,369	28.71	6.16
Las Vegas, NV	32	12	37.5%	662,368	4.83	1.81
Oklahoma City, OK	81	25	30.9%	662,314	12.23	3.77
Portland, OR	56	18	32.1%	656,751	8.53	2.74
Memphis, TN	223	63	28.3%	649,705	34.32	9.70
Louisville, KY	113	31	27.4%	618,338	18.27	5.01
Milwaukee, WI	87	15	17.2%	589,067	14.77	2.55
Baltimore, MD	62	16	25.8%	586,131	10.58	2.73
Albuquerque, NM	105	30	28.6%	562,540	18.67	5.33
Tucson, AZ	125	37	29.6%	553,571	22.58	6.68
Fresno, CA	71	29	40.8%	530,267	13.39	5.47
Mesa, AZ	47	17	36.2%	528,159	8.90	3.22
Sacramento, CA	43	21	48.8%	512,838	8.38	4.09
Atlanta, GA	81	25	30.9%	512,550	15.80	4.88

Sources: FARS 2020 ARF; Population – Census Bureau
Note: Sorted by highest to lowest population.

2020 was not a normal year, but ped rate for Champaign and Urbana are steady for at least 4 years

Vision Zero Strategies Include:

1. Building and sustaining leadership, collaboration, and accountability – especially among a diverse group of stakeholders (transportation professionals, policymakers, public health officials, police, and community members)
2. Collecting, analyzing, and using data to understand trends and potential disproportionate impacts of traffic deaths
3. Prioritizing equity and community engagement
4. Managing speed to safe levels
5. Setting a timeline to achieve zero traffic deaths and serious injuries, which brings urgency and accountability, and ensuring transparency on progress and challenges.

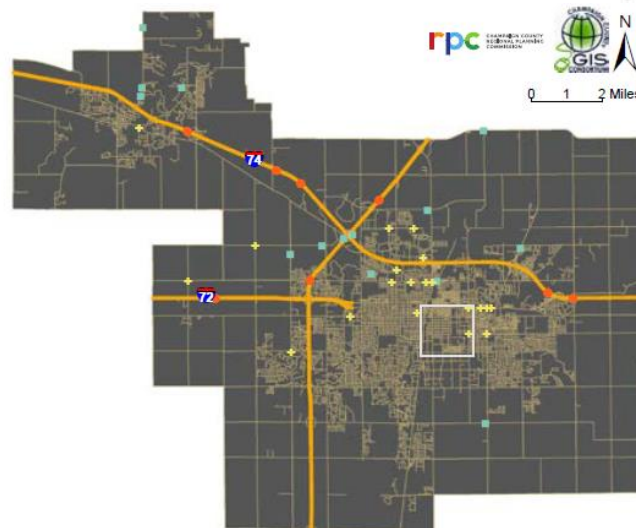
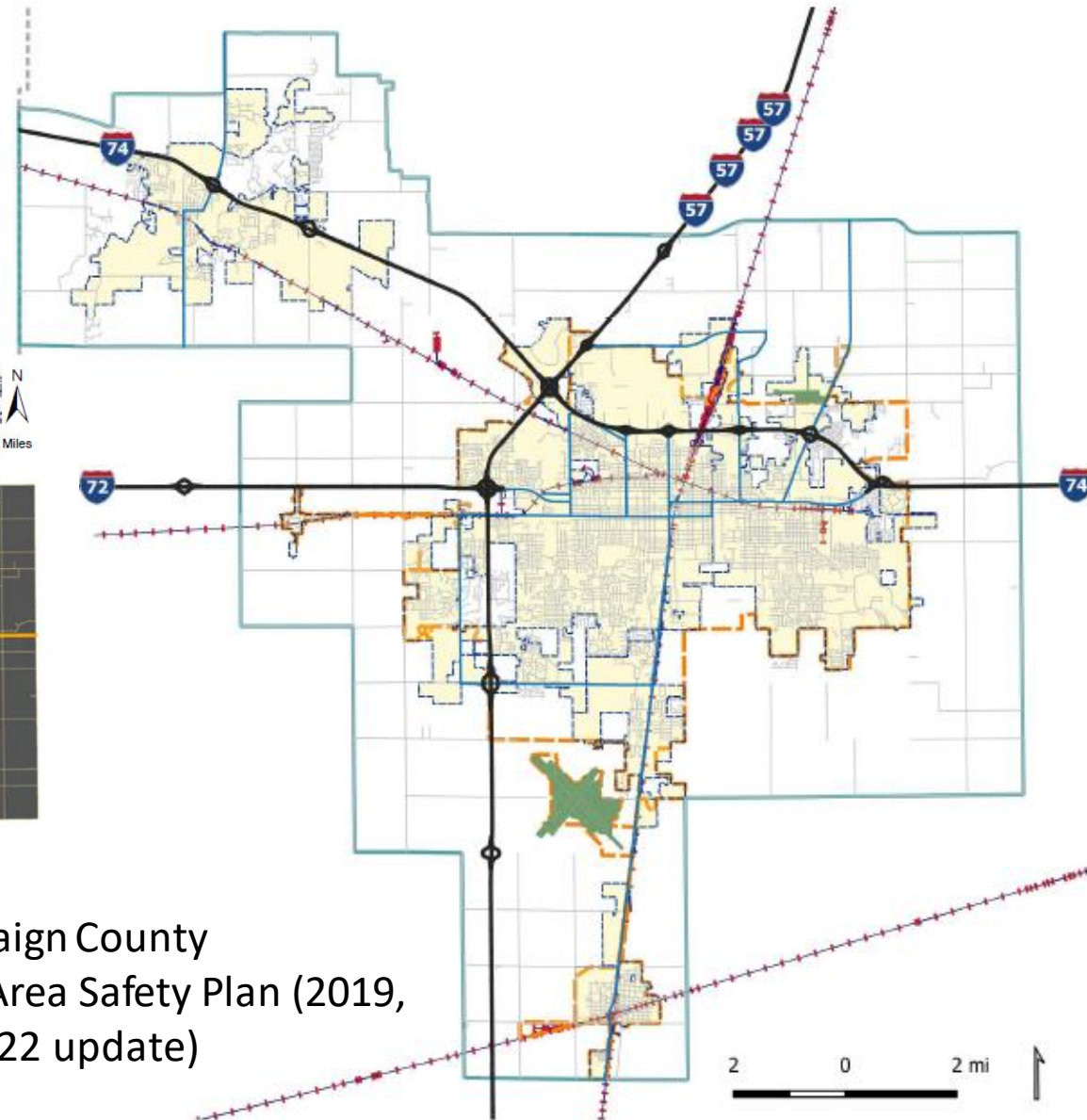
CU Urbanized Area Transportation Study

1. Building and sustaining **leadership, collaboration, and accountability*** – especially among a diverse group of stakeholders (transportation professionals, policymakers, public health officials, police, and **community members****)

*After 2018, RPC ceased to separate the crash, injury and fatality statistics by responsible municipality. The Urban Safety Plan includes the entire Metropolitan Planning Area which is not representative of Urbana nor even of the urbanized area as it contains the rural area bordering the municipalities. The goals and reporting consider 5-year trends which creates a moving baseline.

**The Safety Committee comprises professionals only, no public safety advocates/activists. All Vision Zero Task Forces and SS4A mandate the inclusion of roadway users/activists (the public).

Figure 1: CUUATS Urbanized Area and Metropolitan Planning Area



From:
Champaign County
Urban Area Safety Plan (2019,
with 2022 update)

USDOT National Roadway Safety Strategy

The Safe System approach is expected to win a Safe Streets for All grant also known as SS4A.

<https://www.transportation.gov/NRSS/SafeSystem>



Successful planning grant winners for 2023 included McLean County, individual cities such as Starksville MS who applied together with the Mississippi State University, Ann Arbor MI, and several cities within regions that included an Metropolitan Planning Organization.

Vision Zero Suggested Action Item

Whereas the Urbana City Council passed a Vision Zero resolution in October 2020 that calls for a goal of zero deaths and serious injuries on Urbana roadways by 2030; and

Whereas there have been four pedestrian deaths in the four years 2019-2022, with three of the four occurring on or near Vine or Cunningham, and the 4th on the East Main Street, and this rate of pedestrian deaths is unacceptable in reaching the goal of zero deaths by 2030 and in comparison with other cities;

Whereas funding is needed to study and consider a system-wide approach to reducing speed in order to reduce the likelihood of serious injury and death within Urbana and increase the comfort and vibrancy of Urbana streets; and

Whereas additional demonstration projects to improve the safety of streets for all users and especially pedestrians and bicycles can be implemented on Lincoln Avenue and other locations; and

Whereas there is no conflict between Urbana seeking funding under the Action Plans and Supplemental Planning and Demonstration grant to fulfill its Zero Vision commitment and the Regional Planning Commission seeking an Implementation Grant from the SS4A program; then

Vision Zero Suggested Action Item

BPAC recommends that Urbana city staff should investigate and make an application for a Safe Streets for All (SS4A) grant for the purpose of funding the Urbana Vision Zero Action Plan and demonstration projects aimed at reducing the residential speeds and creating safe and vibrant streets throughout the City. <https://www.transportation.gov/grants/SS4A>
Staff should start by attending the April 26 and 27 SS4A webinars:

SS4A: Action Plans

Wednesday, April 26, 2023, 1:00-2:30 p.m. (EDT)

This webinar will offer a general overview of the SS4A program and the grant application process with a particular focus on applying for grants to develop an Action Plan. A webinar on April 27 will provide further guidance for those interested in also applying for Supplemental Planning and Demonstration activities.

[Register to attend the April 26 Action Plans webinar.](#)

SS4A: Supplemental Planning and Demonstration

Thursday, April 27, 2023, 1:30-3:00 p.m. (EDT)

This webinar will offer a general overview of the SS4A program and the grant application process and provide a particular focus on applying for funding for Supplemental Planning and Demonstration activities.

[Register to attend the April 27 Supplemental Planning and Demonstration webinar.](#)

Stakeholder Perspective

Non-Urbanized Areas

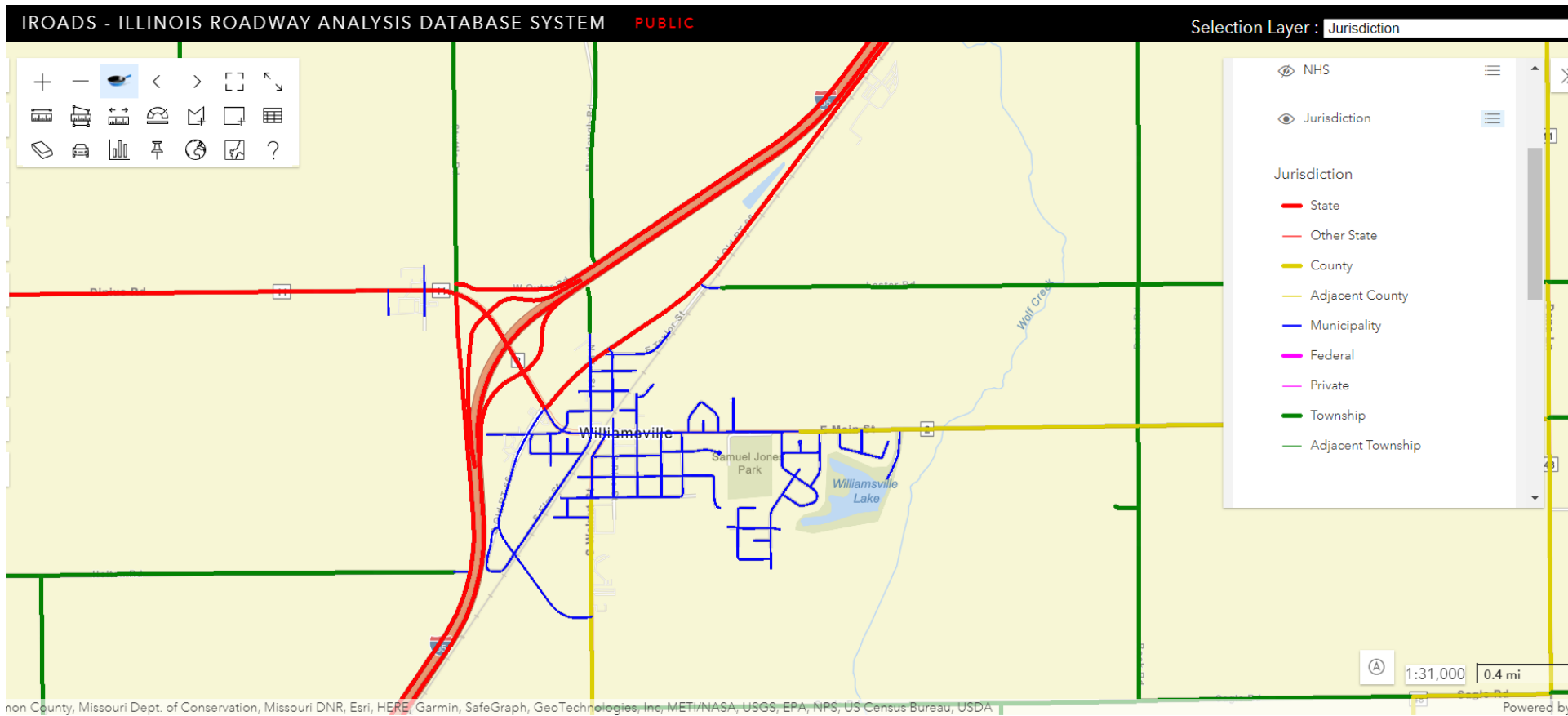
- **Stephen Letsky**
 - Project Development Engineer, IDOT Bureau of Locals Roads & Streets
- **Dave Simmons**
 - Executive Director, Ride Illinois
- **Carlos Feliciano**
 - IDOT District 1





Non-Urban Jurisdictional Owners

- Counties (County Engineer)
- Townships (Township Road Commissioners)
- Municipalities – Cities, Towns, Villages (Public Works Directors, Town/Village/City Engineers)



Typical State Funds for VRU *Infrastructure*

- Safe Routes to School (SRTS) – Upcoming Solicitation, fall of odd years
- Illinois Transportation Enhancement Program (ITEP) – Solicitations in fall of even years
- Transportation Alternative Program (TAP) – through MPOs
- Highway Safety Improvement Program (HSIP)
- State Motor Fuel Tax

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

September 9, 2022

This table indicates potential eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

	Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds																												
	Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.																												
Activity or Project Type	OST Programs								Federal Transit				NHTSA		Federal Highway Administration														
	RAISE	INFRA	RCP	SS4A	Thrive	RRIE	TIIFA	FTA	ATI	TOD	AoPP	402	405	BFP BIP BRR	CRP	CMAQ	HSIP	RHCP	NHPP	PRO TECT	STBG	TA	RTP	SRTS	PLAN	NSBP	FLTP	TTP	TTPSF
Access enhancements to public transportation (benches, bus pads)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$			\$	\$	\$	\$				\$	\$	\$	
Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan				\$	TA					\$	\$				\$						\$	\$	\$		\$		\$	\$	
Barrier removal for ADA compliance	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$			\$	\$				\$	\$	\$	\$	\$	\$		\$	\$	\$	
Bicycle plans			~\$	\$				\$		\$	\$				\$					\$	\$	\$		\$	\$		\$	\$	\$
Bicycle helmets (project or training related)												\$									\$	\$SRTS		\$				\$	
Bicycle helmets (safety promotion)																					\$	\$SRTS		\$				\$	
Bicycle lanes on road	~\$	~\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$	\$	\$	\$	\$	\$	\$		\$			\$	\$	\$
Bicycle parking (see Bicycle Parking Solutions)	~\$	~\$	\$	\$		~\$	\$	\$	\$		~\$				\$	\$			\$		\$	\$	\$	\$		\$	\$	\$	
Bike racks on transit	~\$		\$	~\$			~\$	\$	\$		~\$				\$	\$					\$	\$					\$	\$	
Bicycle repair station (air pump, simple tools)	~\$		\$	~\$		~\$	~\$	\$	\$						\$						\$	\$					\$	\$	
Bicycle share (capital and equipment; not operations)	~\$	~\$	\$	~\$		~\$	~\$	\$	\$						\$	\$			\$		\$	\$					\$	\$	
Bicycle storage or service centers (example: at transit hubs)	~\$		\$	~\$		~\$	\$	\$	\$						\$	\$					\$	\$					\$	\$	
Bridges / overcrossings for pedestrians and/or bicyclists	\$	\$	\$	\$		~\$	~\$	\$	\$					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Bus shelters and benches	\$	\$	\$	~\$		~\$	~\$	\$	\$						\$	\$			\$	\$	\$	\$				\$	\$	\$	
Coordinator positions (State or local) (limits on CMAQ and STBG)				\$							\$					\$					\$	\$SRTS		\$				\$	
Community Capacity Building (develop organizational skills/processes)				\$	TA					\$	\$														\$			\$	
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)	\$	\$	\$	\$		~\$	~\$	\$	\$						\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$	\$	\$	\$
Curb ramps	\$	\$	\$	\$		~\$	~\$	\$	\$					\$	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$	\$	\$	\$
Counting equipment		\$	\$	\$			~\$	\$	\$								\$		\$		\$	\$	\$	\$	\$		\$	\$	\$
Data collection and monitoring for pedestrians and/or bicyclists	\$	\$	\$	\$			~\$	\$	\$	\$	\$				\$		\$		\$		\$	\$	\$	\$	\$		\$	\$	\$
Emergency and evacuation routes for pedestrians and/or bicyclists	\$	\$	\$	~\$			\$	\$	\$	~\$	~\$				\$				\$	\$	\$	\$	\$	\$			\$	\$	
Historic preservation (pedestrian and bicycle and transit facilities)	~\$		~\$	~\$		~\$	~\$	\$	\$		~\$				\$						\$	\$				\$	\$	\$	
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project	~\$	~\$	~\$	~\$		~\$	~\$	\$	\$	~\$	~\$				\$				~\$	\$	\$	\$					\$	\$	
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$	\$	\$	\$
Maps (for pedestrians and/or bicyclists)				\$				\$	\$	\$	~\$				\$	\$					\$	\$		\$	\$	\$		\$	
Micromobility projects (including scooter share)	\$		\$	~\$		~\$	~\$				~\$				\$	\$					\$	\$					\$	\$	
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$	\$		~\$	~\$							\$	\$	\$	\$	\$	\$	\$	\$	\$		\$		\$	\$	\$	\$
Pedestrian plans	\$	~\$	~\$	\$				\$		\$	\$				\$					\$	\$	\$	\$	\$	\$		\$	\$	\$
Rail at-grade crossings	\$	\$	\$	~\$		\$	\$	\$	\$						\$		\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Recreational trails	\$		\$	~\$			~\$														\$	\$	\$			\$	\$	\$	
Resilience Improvements for pedestrians and bicyclists	\$	\$	\$	~\$		~\$	~\$			\$	~\$			~\$	~\$	~\$			\$	\$	\$	\$	\$	\$		\$	\$	\$	
Road Diets (pedestrian and bicycle portions)	\$	\$	\$	\$		~\$	\$								\$	\$	\$			\$	\$	\$		\$			\$	\$	\$

	Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds																												
	Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.																												
	OST Programs							Federal Transit				NHTSA		Federal Highway Administration															
Activity or Project Type	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BFP BIP BRR	CRP	CMAQ	HSIP	RHCP	NHPP	PRO TECT	STBG	TA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TTPSF
Road Safety Assessment for pedestrians and bicyclists			\$	\$	TA		~\$				~\$						\$	\$			\$	\$			\$		\$	\$	\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike traffic safety laws				\$							~\$	\$	\$				\$				\$SRTS	\$SRTS		\$	\$				\$
Safety education positions				\$							~\$	\$									\$SRTS	\$SRTS		\$					\$
Safety enforcement (including police patrols)				\$								\$	\$				\$				\$SRTS	\$SRTS		\$					\$
Safety program technical assessment (for peds/bicyclists)			\$	~\$	TA						~\$	\$					\$				\$SRTS	\$SRTS		\$	\$			\$	\$
Separated bicycle lanes	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$		\$		\$	\$	\$	\$
Shared use paths / transportation trails	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sidewalks (new or retrofit)	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Signs, signals, signal improvements (incl accessible pedestrian signals) see note	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$				\$	\$	\$	\$	\$	\$	\$	\$		\$		\$	\$	\$	\$
Signing for pedestrian or bicycle routes	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$	\$		\$	\$	\$	\$		\$		\$	\$	\$	\$
Spot improvement programs (for pedestrian and bicycle facilities)	\$	\$		\$		~\$	~\$	\$			~\$				\$		\$	\$	\$		\$	\$	\$	\$			\$	\$	\$
Stormwater impacts related to pedestrian and bicycle project impacts	\$	\$	\$	~\$		~\$	~\$	\$	\$								\$	\$	\$	\$	\$	\$	\$	\$	\$		\$	\$	\$
Traffic calming	\$	\$	\$	\$		~\$	~\$	\$							\$		\$			\$	\$	\$	\$	\$			\$	\$	\$
Trail bridges	\$	\$	\$	~\$		~\$	\$								\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$
Trail construction and maintenance equipment				~\$		~\$	~\$								\$						\$	\$	\$				~\$	~\$	~\$
Trail/highway crossings and intersections	\$	\$	\$	\$		~\$	~\$							\$	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$	\$	\$	\$
Trailside/trailhead facilities (restrooms, water, not general park amenities)	~\$					~\$	~\$								~\$						\$	\$	\$			\$	\$	\$	
Training				\$	TA						~\$	\$				\$	\$				\$	\$	\$	\$	\$			\$	
Training for law enforcement on ped/bicyclist safety laws				~\$								\$	\$			~\$	\$					\$SRTS	\$SRTS		\$				\$
Tunnels / underpasses for pedestrians and/or bicyclists	\$	\$	\$	\$		\$	\$	\$	\$						\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Vulnerable Road User Safety Assessment			\$	\$	TA												\$				\$	\$		\$	\$				\$

Abbreviations

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973

[RAISE](#): Rebuilding American Infrastructure with Sustainability and Equity

[INFRA](#): Infrastructure for Rebuilding America Discretionary Grant Program

[RCP](#): Reconnecting Communities Pilot Program

[SS4A](#): Safe Streets and Roads for All

[Thrive](#): Thriving Communities Initiative (TA: Technical Assistance)

[RRIF](#): Railroad Rehabilitation and Improvement Financing (loans)

[TIFIA](#): Transportation Infrastructure Finance and Innovation Act (loans)

[FTA](#): Federal Transit Administration Capital Funds

[ATI](#): Associated Transit Improvement (1% set-aside of FTA)

[TOD](#): Transit-Oriented Development

[AoPP](#): Areas of Persistent Poverty Program

NHTSA [402](#): National Highway Traffic Safety Administration State and Community Highway Safety Grant Program

NHTSA [405](#): National Highway Traffic Safety Administration National Priority Safety Programs (Nonmotorized safety)

[BFP](#): Bridge Formula Program; [BIP](#): Bridge Investment Program; [BRR](#): Bridge Replacement and Rehabilitation Program

[CRP](#): Carbon Reduction Program

[CMAQ](#): Congestion Mitigation and Air Quality Improvement Program

[HSIP](#): Highway Safety Improvement Program

[RHCP](#): Railway-Highway Crossings (Section 130) Program

[NHPP](#): National Highway Performance Program

[PROTECT](#): Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation

[STBG](#): Surface Transportation Block Grant Program

[TA](#): Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program, Transportation Enhancements)

[RTP](#): Recreational Trails Program

[SRTS](#): Safe Routes to School Program (and related activities)

[PLAN](#): Statewide Planning and Research (SPR) or Metropolitan Planning funds

[NSBP](#): National Scenic Byways Program

[FLTTP](#): Federal Lands and Tribal Transportation Programs: [Federal Lands Access Program](#), [Federal Lands Transportation Program](#), [Tribal Transportation Program](#), [Federal Lands Planning Program](#) and related programs for Federal and Tribal lands

such as the [Nationally Significant Federal Lands and Tribal Projects](#) program.

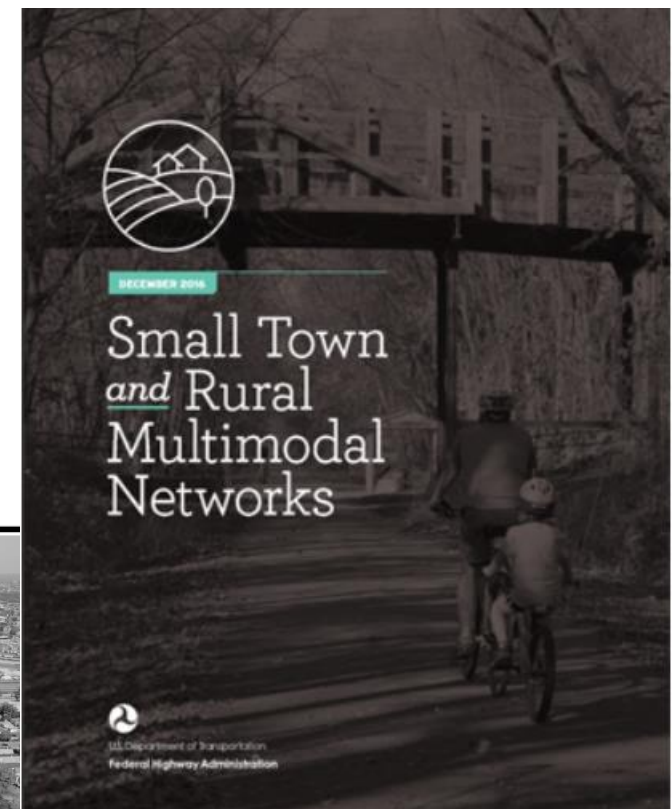
[TTP](#): Tribal Transportation Program

[TTPSF](#): Tribal Transportation Program Safety Fund

Source: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf

Resources

Bureau of Local Roads and Streets Manual



Bureau of Design and Environment Manual



Guide for the Development of Bicycle Facilities

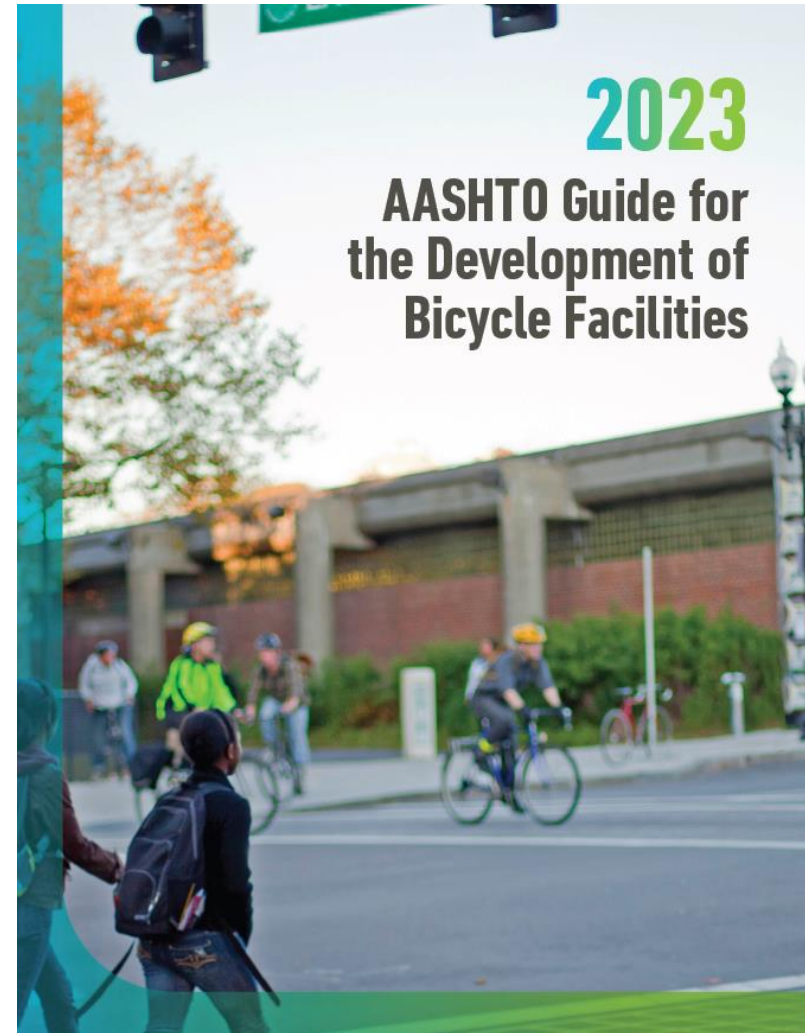
2012 • Fourth Edition



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2023

AASHTO Guide for the Development of Bicycle Facilities



DRAFT 2023 UPDATE,
SUBJECT TO MUTCD UPDATES
AND AASHTO PROCESSES

THANK YOU!

STEPHEN LETSKY, PE

UNTIL 3 WEEKS AGO: BICYCLE, PEDESTRIAN & ADA POLICY
ENGINEER FOR STATE ROUTES

CURRENT: PROJECT DEVELOPMENT ENGINEER, BUREAU OF LOCAL
ROADS & STREETS – IDOT Districts 1, 2 & 3

*SIDE ROLE: IL MEMBER TO AASHTO NON-MOTORIZED
TRANSPORTATION COMMITTEE, responsible for updating AASHTO
Bike & Ped Guides*

STEPHEN.LETSKY@ILLINOIS.GOV

IDOT VULNERABLE ROAD USERS D1 SAFETY INITIATIVES



CARLOS A. FELICIANO, P.E.

IN-HOUSE PROJECT & ENVIRONMENTAL STUDIES UNIT HEAD

D1 ADA & BICYCLE COORDINATOR

IDOT DISTRICT 1 SAFETY INITIATIVES

- HSIP PROJECTS (SAFETY)
 - INCREASE IN ROAD DIETS FOR BIKE/PED SAFETY COUNTERMEASURES
- UNCONTROLLED CROSSINGS GUIDE (TRA-23) (SAFETY)
- LEAD PEDESTRIAN INTERVAL (LPI) POLICY (OPS T-07) (SAFETY)
- PEDESTRIAN SAFETY IMPROVEMENT ASSESSMENTS IN MYP (SAFETY)
- PEDESTRIAN SAFETY CORRIDOR EVALUATIONS FOR VRU HSIP PROJECTS (SAFETY)
- ADA ACCESSIBLE PEDESTRIAN SIGNAL (APS) IMPLEMENTATION POLICY (OPS T-13) (ACCESSIBILITY)
- ADA STAND ALONE COUNTY PROJECTS (ACCESSIBILITY)
- BICYCLE FACILITY INVENTORY SYSTEM (BFIS) GIS DATABASE (ACCESSIBILITY & SAFETY)

SAFETY VS. ACCESS

IDOT

**IMPROVEMENTS TO PROVIDE MORE MULTIMODAL
ACTIVE TRANSPORTATION WHILE CONTINUING TO
IMPROVE SAFETY**

BLRS Chapter 41 & 42 / BDE Chapter 17 & 58

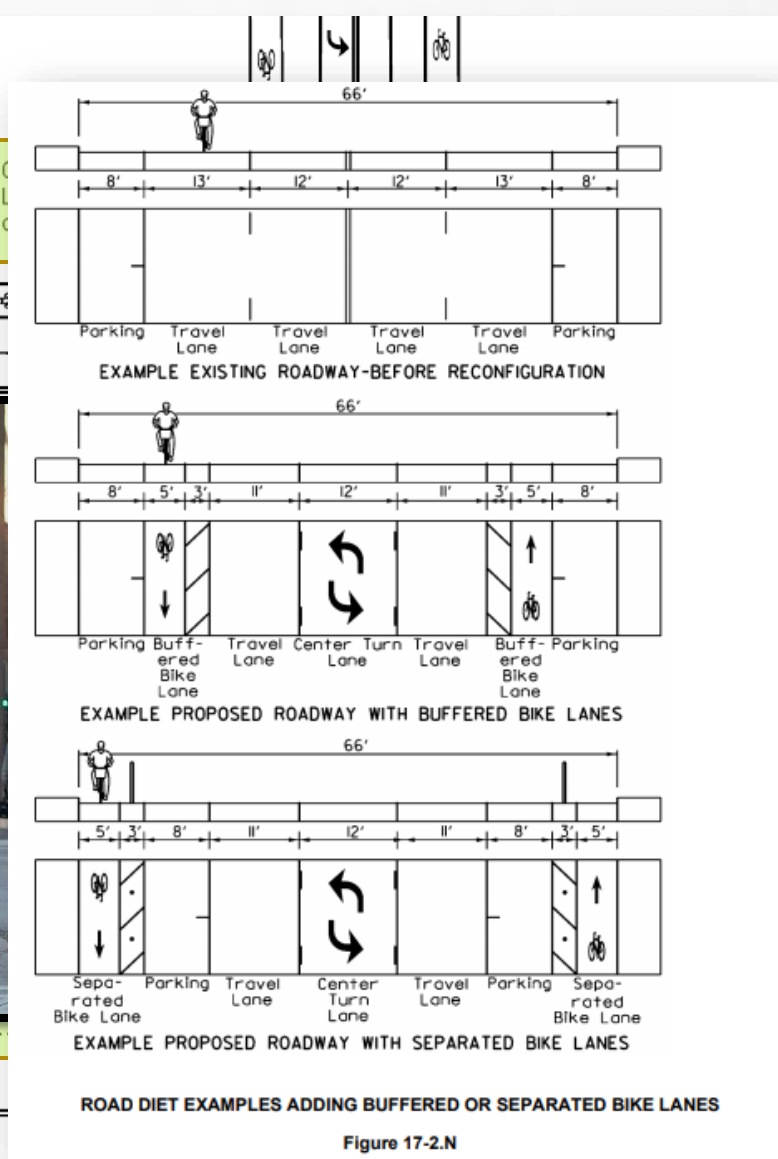
BICYLIST SAFETY

57

VULNERABLE ROAD USER SAFETY

IDOT'S DESIGN SELECTION

- PAVED SHOULDER FACILITIES
 - With and without rumble strips
- SHARED LANE MARKINGS
- CONVENTIONAL/BUFFERED BIKE LANES
- ROAD DIETS
- BRIDGE/CULVERT ACCOMMODATIONS
- SEPARATED BIKE LANES ^{NEW}
- RAISED CYCLE TRACKS ^{NEW}
- INTERSECTION TREATMENTS ^{NEW}
- BIKE SIGNALS ^{NEW}



MUTCD Interim Approvals

- Bike Boxes
- Two-Stage Bike Turn Box
- Green Pavement Markings
- Bike Signals

**Must be reported to
IDOT's Bureau of
Operations to maintain
inventory**

Proposed MUTCD NPA may
incorporate these interim
approvals





Mobility · Safety · Quality · Environment · Shortening Project Delivery

- STATE-BASED MODEL TO IDENTIFY AND RAPIDLY DEPLOY PROVEN, BUT UNDERUTILIZED INNOVATIONS

IMPLEMENTATION STAGES

1. NOT IMPLEMENTING
2. DEVELOPMENT STAGE
3. DEMONSTRATION STAGE
4. ASSESSMENT STAGE
5. INSTITUTIONALIZATION STAGE

PEDESTRIAN SAFETY

60

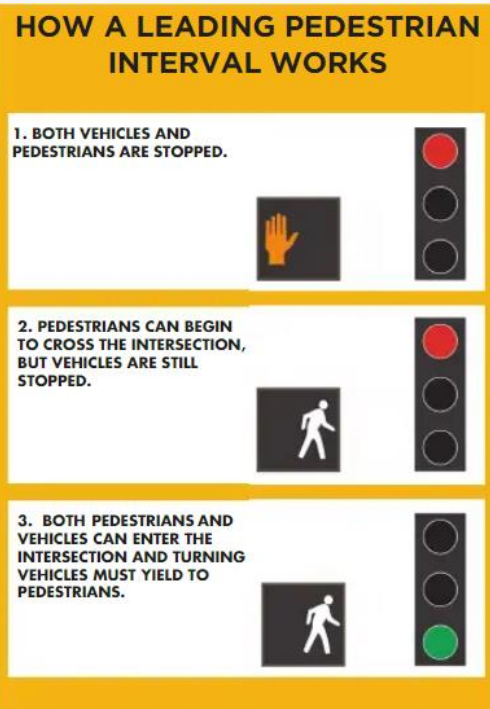
VULNERABLE ROAD USER SAFETY



The Spectacular Seven

1. LEADING PEDESTRIAN INTERVAL (LPI)

DEMONSTRATION



Can Reduce Pedestrian Crashes by 60%, USDOT

- Increases visibility of crossing pedestrians
- Reduces conflicts between peds and vehicles
- Increases likelihood of vehicles yielding to pedestrians already in the crossing
- Enhances safety for pedestrians who may be slower to start or need more time to cross
- IDOT Operations released new LPI Guidelines in 2021

10. Leading Pedestrian Interval (LPI) The practice of displaying the walk symbol to pedestrians several seconds ahead of parallel vehicular traffic receiving a green signal allowing pedestrians a 'head start' to occupy the crosswalk and increase their visibility to both right-turning and left-turning drivers.

2. CROSSING VISIBILITY ENHANCEMENTS

Can Reduce Pedestrian Crashes by 23 to 48%, USDOT

- Providing enhanced signage, and visible pavement markings

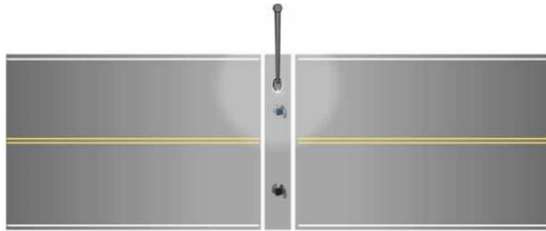


Figure 11. Drawing. Traditional midblock crosswalk lighting layout.



Figure 12. Drawing. New design for midblock crosswalk lighting layout.

Figure 18: Two types of pedestrian lighting placement.



EDC Figure from PedBikeSafe.org (FHWA)



TRA 23 – IDOT UNCONTROLLED CROSSINGS GUIDELINES

2. CROSSING VISIBILITY ENHANCEMENTS

ASSESSMENT

Can Reduce Pedestrian Crashes by 23 to 48%, USDOT

TRA-23: GUIDELINES FOR PEDESTRIAN CROSSINGS AT UNCONTROLLED LOCATIONS

MARCH 11, 2019

TRA 23 – IDOT UNCONTROLLED CROSSINGS GUIDELINES

Figure 1 – Summary of Recommendations for Pedestrian Crossings at Uncontrolled Locations, Two Way Streets Only

Configuration, including turn and parking lanes *	ADT ≤ 9000				9000 < ADT < 15,000				15,000 < ADT < 25,000				25,000 < ADT < 35,000				ADT ≥ 35,000
	Posted Speed or 85 th Percentile Speed, mph																All
	≤30	35	40	≥ 45	≤30	35	40	≥ 45	≤30	35	40	≥ 45	≤30	35	40	≥ 45	
2 lanes or 3 with refuge	1	2	4	Site-Specific Design	1	3	4	Site-Specific Design	2	3	4	Site-Specific Design	2	4	4	Site-Specific Design	Site-Specific Design
3 lanes no refuge	1	2	4		1	4	4		3	4	4		4	4	5		
4 lanes with refuge	2	3	4		3	4	4		4	4	4		4	5	5		
6 lanes with refuge	3	4	4		3	4	5		4	4	5		5	5	5		
> 4 lanes no refuge	Site-Specific Design				Site-Specific Design				Site-Specific Design				Site-Specific Design				
4 lanes, refuge not feasible	3	3	5		3	4	5		4	5	5		5	5	5		

Treatment Number	Treatment Detail
1	Four W11-2 Ped Signs, two with W16-9P "Ahead", two with W16-7P Slanted Down Arrow plaques
2	Treatment 1 + Timed or pedestrian actuated warning beacons. Continuously operated beacons are not recommended.
3	Treatment 2 + R1-5b Stop Here for Pedestrians signs at stop bar pavement marking (omit R1-5b for single lane approach)
4	Treatment 1 + Rectangular Rapid Flashing Beacon
5	Standard Traffic Signal or Pedestrian Hybrid Beacon; review IL MUTCD for placement restrictions

Crosswalk Pavement Marking	Application
Parallel lines	Signal controlled intersections, stop controlled legs of intersections
Continental	Uncontrolled intersections, mid-block crossings, uncontrolled legs of intersections
Ladder	Enhanced conspicuity at uncontrolled locations

* Refuge is defined as a raised median or other pedestrian safety island

Vers. 2.0 is in DRAFT mode at the moment at IDOT

Version 1.0

Page 4 of 4



PEDESTRIAN SAFETY

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VULNERABLE ROAD USER SAFETY

3. RECTANGULAR RAPID FLASHING BEACON (RRFB)

DEMONSTRATION

Can Reduce Pedestrian Crashes by 47%, USDOT

- RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system.
- RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles.
- RRFBs may be installed on either two-lane or multi-lane roadways. (performance on multi-lane needs consideration)
- Improves driver yielding behavior



DEMONSTRATION

4. PEDESTRIAN REFUGE ISLANDS, MIDBLOCK CROSSING

Can Reduce Crashes by 32%, USDOT



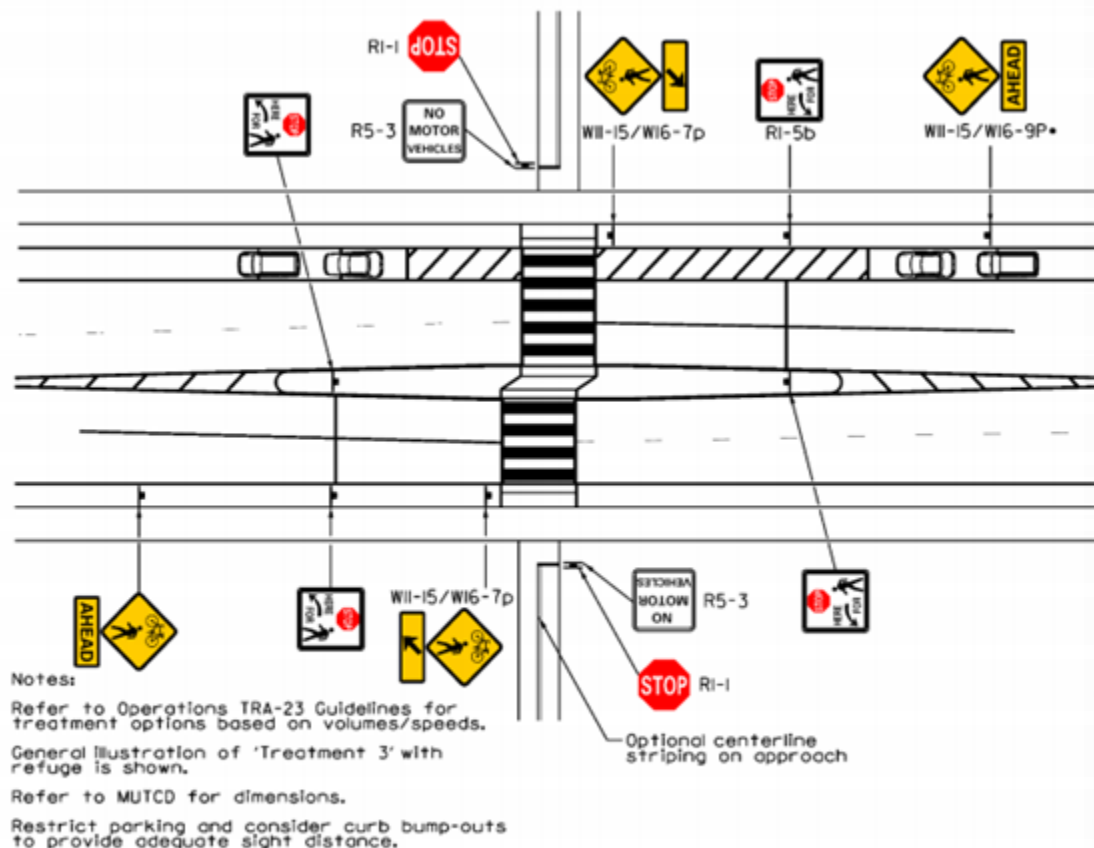
Route 40/Knoxville Ave, Peoria IL



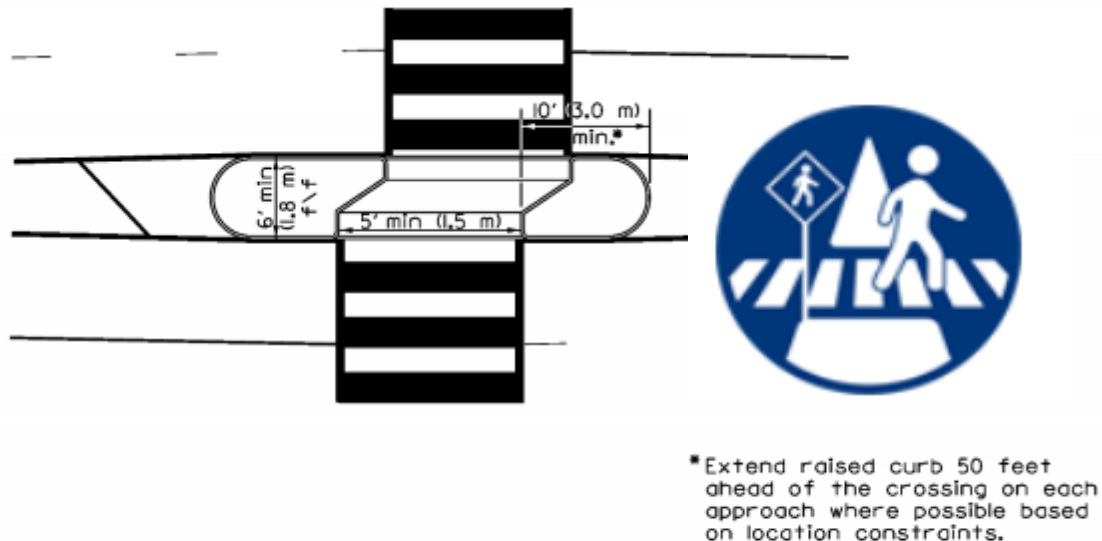
4. PEDESTRIAN REFUGE ISLANDS, MIDBLOCK CROSSING

DEMONSTRATION

EXAMPLE MIDBLOCK CROSSWALK WITH REFUGE FOR SHARED-USE PATH
Figure 17-4.C
(1 of 2)



Can Reduce Crashes by 32%, USDOT



EXAMPLE MIDBLOCK CROSSWALK WITH REFUGE FOR SHARED-USE PATH

Figure 17-4.C
(2 of 2)

TRA 23 – IDOT UNCONTROLLED CROSSINGS GUIDELINES

PEDESTRIAN SAFETY

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VULNERABLE ROAD USER SAFETY

4. PEDESTRIAN REFUGE ISLANDS, MIDBLOCK CROSSING DEMONSTRATION



Treatment 1



Treatment 2



Treatment 3



Treatment 4

Pedestrians		Motorists	
Will see this...	Will do this...	Will see this...	Will do this...
	Push button to call for WALK signal (pedestrians automatically select pedestrian signal)		Proceed
	Wait (if walk light is up to 10 seconds for the signal to change)		Proceed with Caution (Signal has been activated)
	Wait		Slow down and prepare to STOP
	Start crossing after you see the WALK signal (Be aware traffic has stopped)		STOP!
	Continue Crossing (Combination signal Flashing DON'T WALK)		STOP! Then proceed with caution if clear
	Push the button to cross		Proceed

Treatment 5

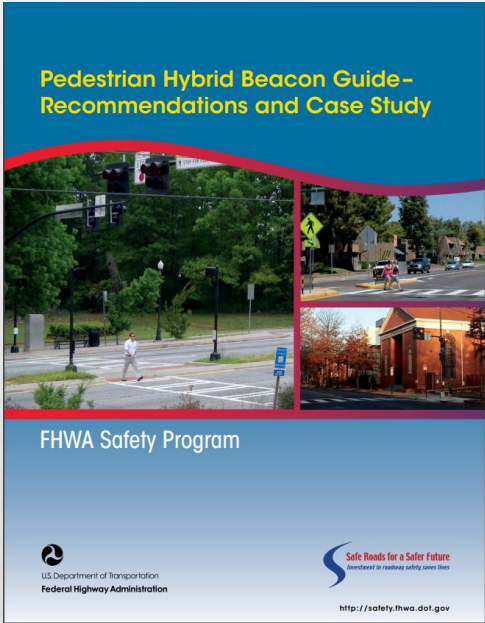


5. PEDESTRIAN HYBRID BEACON

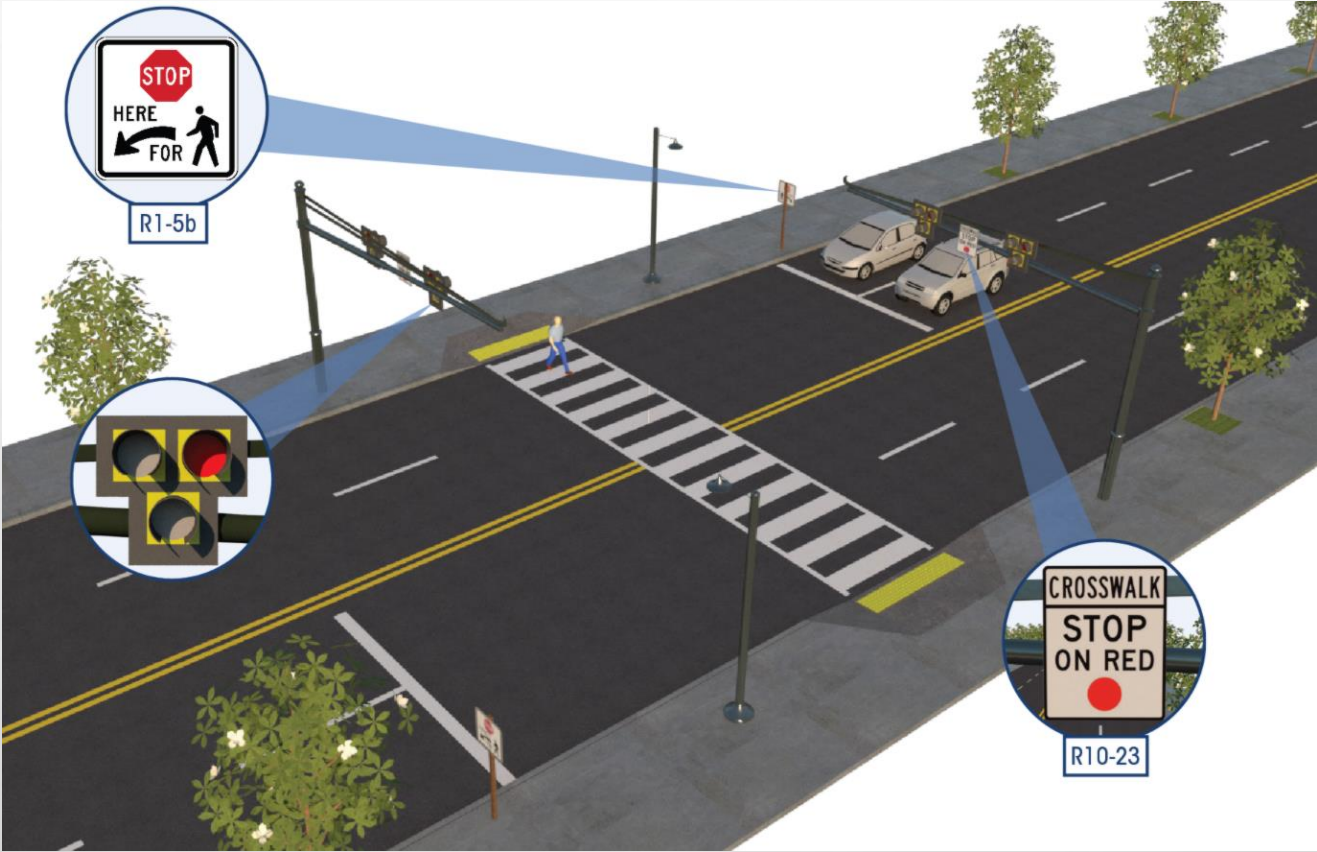
DEVELOPMENT

Can Reduce Crashes by 55%, USDOT

NCHRP Report 562 shows driver compliance is above 95%



PHB image from PedBikeSafe.org (FHWA)



5. PEDESTRIAN HYBRID BEACON

DEVELOPMENT

Can Reduce Crashes by 55%, USDOT

- Few proposals meet MUTCD Criteria
- Pedestrian Traffic Signal preference
- Signals Interconnected to District's vast interconnection network
- Driver Familiarity
- Simplified Maintenance

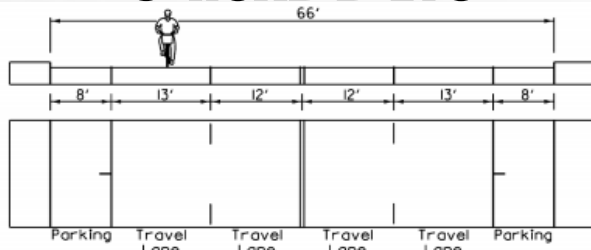


Willow Road in Northfield, IL

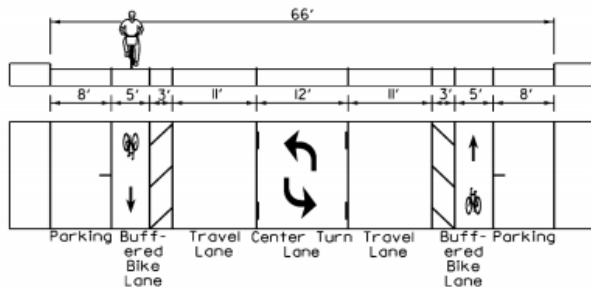
6. ROAD DIETS

DEMONSTRATION

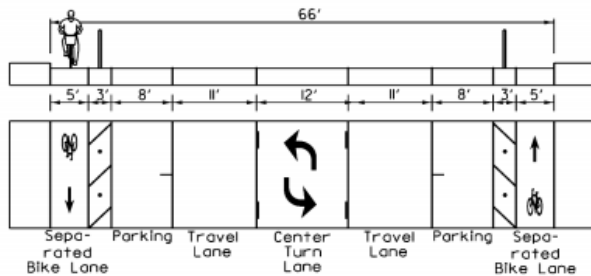
Can Reduce Crashes by 19 to 47%, USDOT



EXAMPLE EXISTING ROADWAY-BEFORE RECONFIGURATION



EXAMPLE PROPOSED ROADWAY WITH BUFFERED BIKE LANES



EXAMPLE PROPOSED ROADWAY WITH SEPARATED BIKE LANES

ROAD DIET EXAMPLES ADDING BUFFERED OR SEPARATED BIKE LANES

Figure 17-2.N

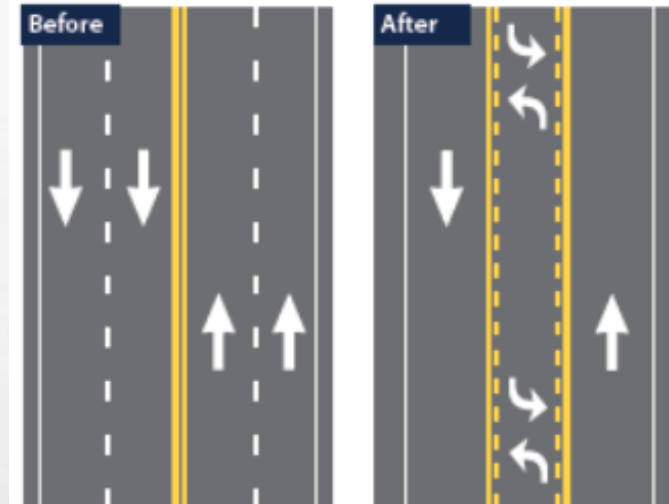


Road Before



Road After

Road Diet on Edgewater Dr., Orlando, FL



Example of a Road Diet



Loads of good FHWA information here:
https://safety.fhwa.dot.gov/road_diets/

Can Reduce Crashes by 19 to 47%, USDOT

6. ROAD DIETS DEMONSTRATION



JACKSON ST: OGDEN TO HALSTED CITY OF CHICAGO

VULNERABLE ROAD USER SAFETY

Can Reduce Crashes by 19 to 47%, USDOT

6. ROAD DIETS DEMONSTRATION



IL 31 o/ Ditch s/o Fargo Blvd



Illinois Route 31 in Geneva

73

VULNERABLE ROAD USER SAFETY

NOT IMPLEMENTING

7. Raised Crosswalk



- Installed on local or collector roads with speeds 30 MPH or less, 2- or 3-lane roads with AADT < 9K.
- May not be appropriate along bus routes or primary emergency vehicle routes.
- Snowplowing can be a concern in IL.
- Pay attention to drainage.
- Also, pay attention to installations in vertical curve roadways.





QUESTIONS

Carlos A. Feliciano, P.E.
In-House Project & Environmental Studies Unit Head
D1 ADA & Bikeway Coordinator

Stakeholder Perspective

Cook County

- **Brian J. Roberts**
 - Traffic Manager, Cook County Department of Transportation and Highways
- **Victoria Barrett**
 - Senior Transportation Planner, Chicago Metropolitan Agency for Planning
- **Dave Simmons**
 - Executive Director, Ride Illinois
- **Carlos Feliciano**
 - IDOT District 1
- **Stephen Letsky**
 - Project Development Engineer, IDOT Bureau of Locals Roads & Streets
- **David Smith**
 - Complete Streets Director, Chicago Department of Transportation

Stakeholder Perspective

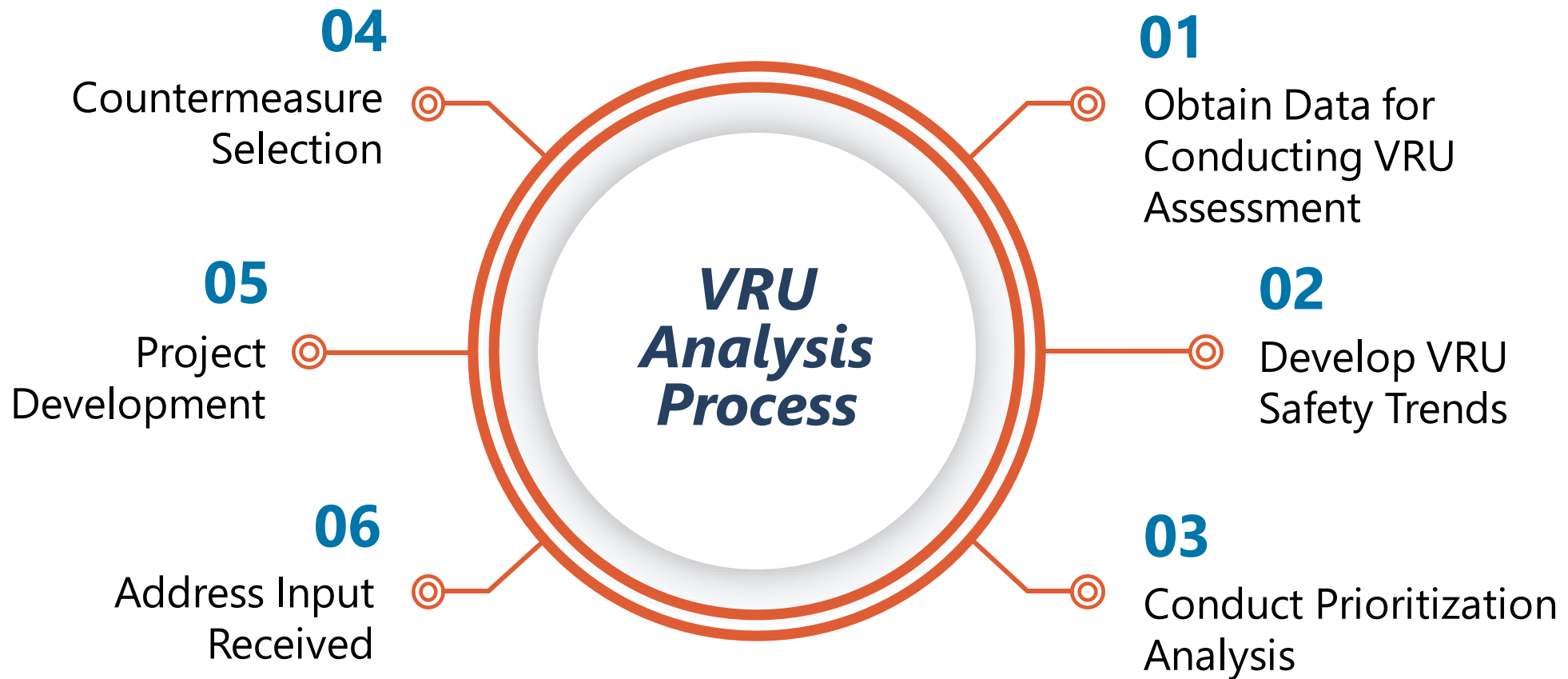
Collar Counties

- **Victoria Barrett**
 - Senior Transportation Planner, Chicago Metropolitan Agency for Planning
- **Dave Simmons**
 - Executive Director, Ride Illinois
- **Carlos Feliciano**
 - IDOT District 1
- **Stephen Letsky**
 - Project Development Engineer, IDOT Bureau of Locals Roads & Street



Survey

Project Development Overview





Preferred Strategies for Improving VRU Safety

Proven Safety Countermeasures, FHWA

Countermeasures that Work, NHTSA



Bicycle Lanes

Crosswalk Visibility Enhancements

Leading Pedestrian Interval

Medians and Pedestrian Refuge Islands in Urban and Suburban Areas

Pedestrian Hybrid Beacons

Rectangular Rapid Flashing Beacons (RRFB)

Road Diets (Roadway Configuration)

Walkways

Pedestrian Infrastructure Enhancements

■ Leading pedestrian interval

- Gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication.
- Reduces pedestrian - vehicle crashes at intersections by **13%**

■ Median and pedestrian refuge islands

- Median with a refuge area that is intended to help protect pedestrians who are crossing a road.
- Medians with marked crosswalks reduces pedestrian crashes by **46%**
- Pedestrian refuge island reduces pedestrian crashes by **56%**



Example of a road with a median and pedestrian refuge islands.
Source: City of Charlotte, NC



Median and pedestrian refuge island near a roundabout.
Source: www.pedbikeimages.org / Dan Burden

Pedestrian Infrastructure Enhancements

■ Crosswalk Visibility Improvements

- High visibility crosswalks, lighting, signing, pavement markings.
- High visibility reduces pedestrian - vehicle crashes up to **40%**
- Lighting reduces pedestrian - vehicle crashes up to **42%**
- Advance yield, stop markings and signs can reduce pedestrian – vehicle crashes by up to **25%**

■ Rectangular Rapid Flashing Beacons (RRFB)

- Sign with flashing beacons activated by pedestrians at the crosswalk.
- RRFBs can reduce pedestrian crashes by **47%**



Source: FHWA



Bicyclist Infrastructure Enhancements

■ Bike Lanes

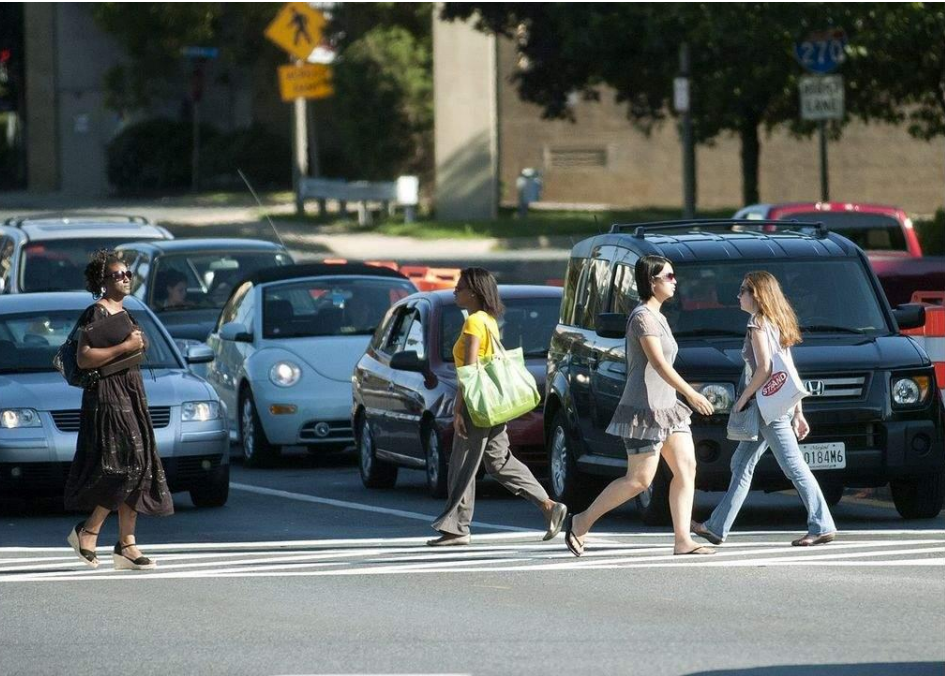
- Enhanced pavement marking to designate areas for biking along the road; protected bike lanes provide separation between bikes and vehicles
- Bike lanes can reduce total crashes on urban 2-lane undivided collectors and local roads by **30%**

■ Roadway Configuration

- Conversion of 4-lane undivided to 2-lanes with center turn lane and bike lanes
- 4-Lane to 3-lane conversions can reduce total crashes by **19 to 47%**



Driver Behavior Programs



- Improve understanding and awareness of vehicle size and speed on crash severity and outcomes
- Enhanced drivers training programs with a focus on improving safety for travelers outside of the vehicle, including yielding to pedestrians at enhanced mid-block crossings and at night
- Improved enforcement of speed and failure to yield
- Improved data to better understand exposure, perceived safety and performance outcomes

Pedestrian and Bicyclist Behavior Programs

- Enhanced education and awareness of high visibility and protective clothing such as helmets, lights
- Education on reducing distraction while walking and biking
- Travel together or at similar times such as a bike-bus



Final Deliverables

- **VRU Safety Assessment Document**
- **Project Recommendation Online Tool**
 - Online tool for viewing and supporting implementation for pedestrian and bicycle safety initiatives

Next Steps

By June 30th

- Share the Survey
- Add information to the VRU Safety Webmap
- Send data to DOT.VRUSafety@illinois.gov

August

- Focused Stakeholder Engagement Series



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