# 2015-2024 Trends of Bicycle Crashes in Michigan Counties
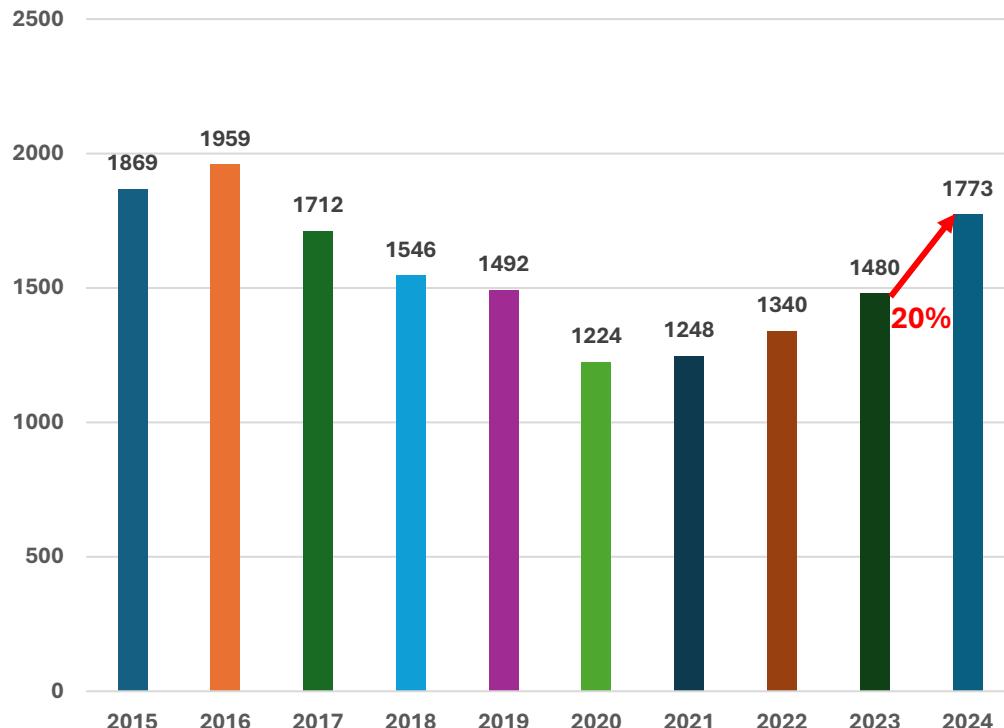
An Update

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# Western Michigan University

12/17/2025

# Bicycle Crash Trends in Michigan and Kalamazoo County
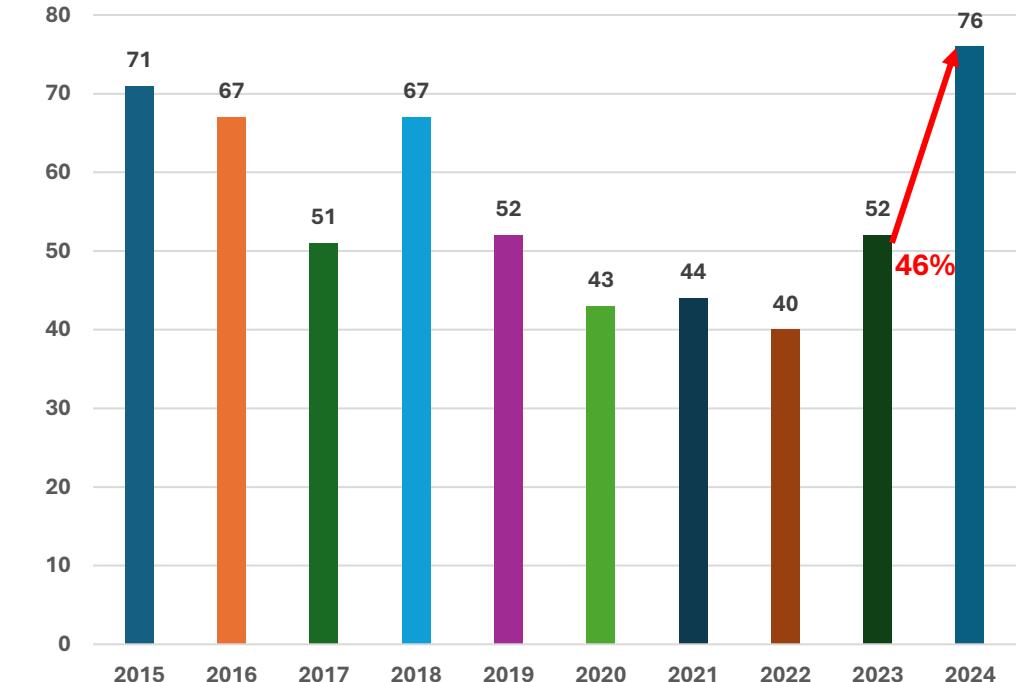
- ➢ Statewide reports for 2024 showed a 20% increase in bicycle crashes across Michigan, with **Kalamazoo County experiencing a rise of 46%,** compared to 2023.

- ➢ Overall, bicycle crashes trended downwards pre-COVID but upward post-COVID statewide. However, **Kalamazoo County shows a steep increase rate post-COVID (with a record high in 2024)**.

BACKGROUND

➢ Of the 255 bicycle crashes recorded from 2020 to 2024, 183 (72%) occurred at intersections.

➢ In 2024, 57 of the 76 bicycle crashes (75%) occurred at intersections.

➢ One common scenario of bicycle crashes at intersections involves instances when **bicyclist flow direction is opposite to main vehicle flow** (**in many cases cyclists are using sidewalks**)

This driver may not be ready for a fast-moving cyclist from their right!
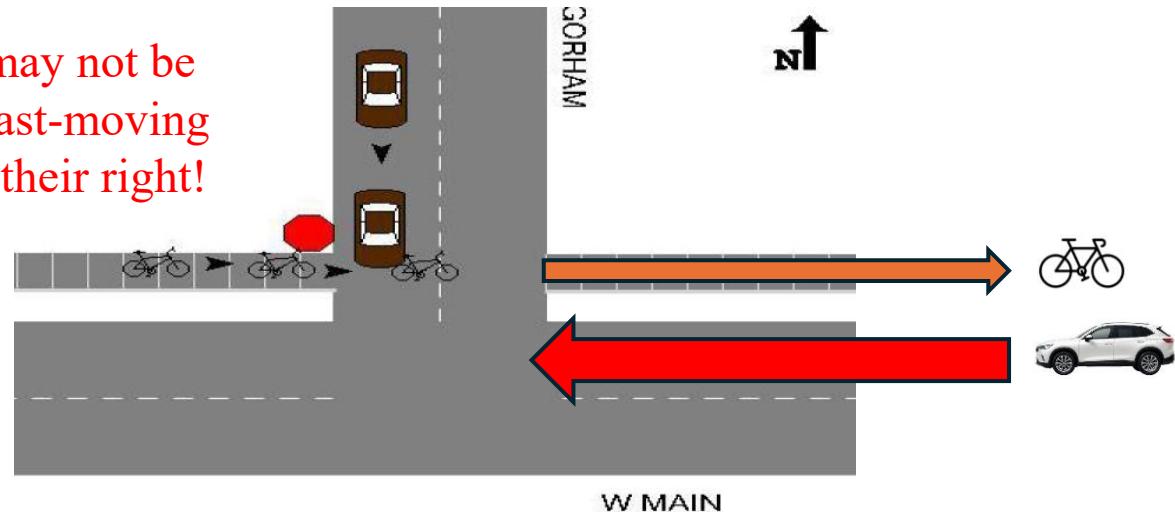
BAR CHART SHOWING BICYCLE CRASHES (2020-2024)

72

183

■ Intersection ■ Other

GORHAM

N

W MAIN
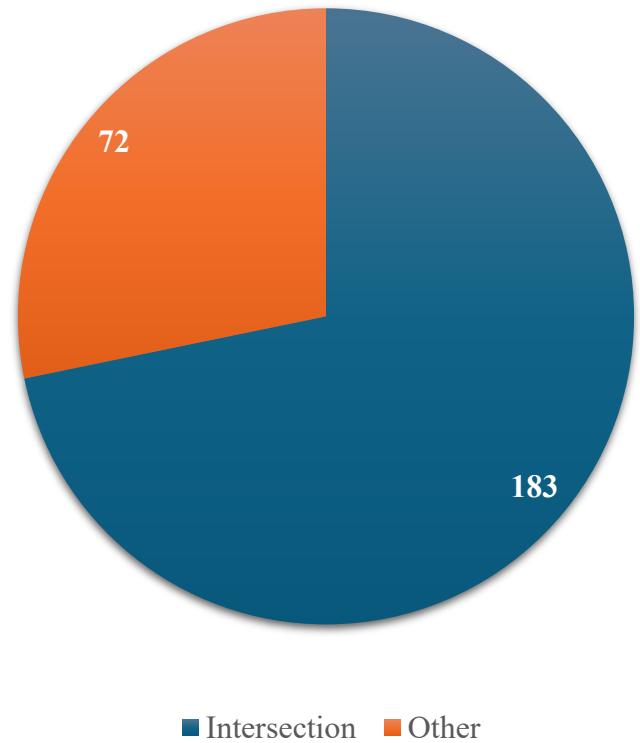
Kalamazoo Bicycle Crashes Trends: 2015-2019 vs 2020-2024

➢ Overall, total five-year bicycle crashes decreased by 17%, decreasing from 308 during 2015–2019 to 255 in 2020–2024.

➢ Crashes involving a scenario where bicyclist is flowing opposite to vehicles increased by 2%, from 91 during 2015–2019 to 93 in 2020–2024.

➢ These crashes accounted for an average of 29.5% of total bicycle crashes in 2015–2019 and 36.8% in 2020–2024.

➢ Most of crashes in this scenario occur at intersections

Crashes/Year: Vehicles Flowing Opposite to Bicycle Flow
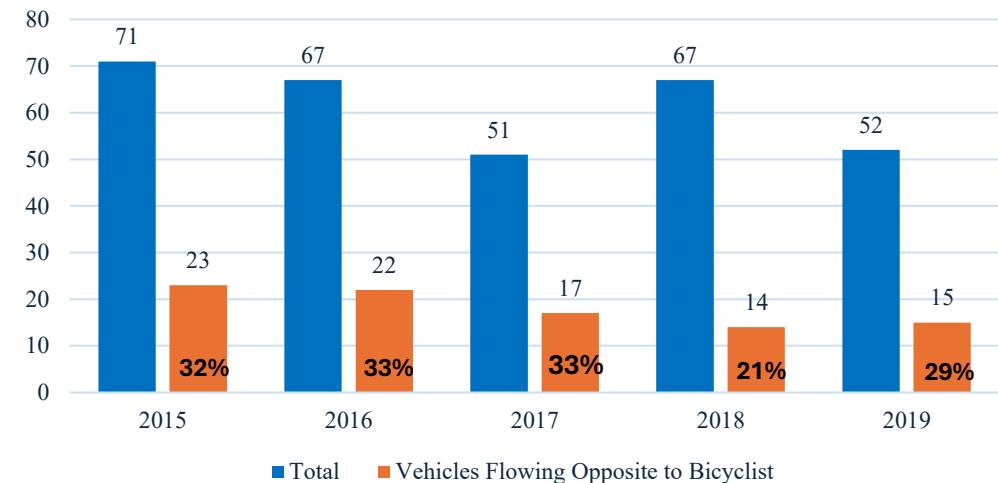
Crashes/Year: Vehicles Flowing Opposite to Bicycle Flow
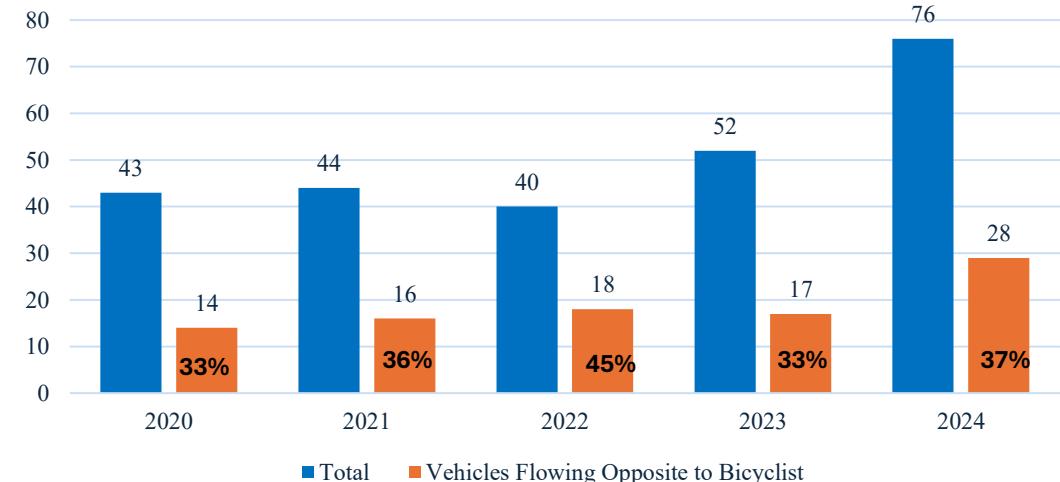
Locations of the Crashes: 2015-2019 vs 2020-2024

Traffic Control	2015-2019		2020-2024	
	Count	Percent (%)	Count	Percent (%)
Signal	37	40	46	50
Stop	41	45	28	30
Yield	0	1	1	1
None	13	14	18	19
Total	91	100	93	100

➢ There was a significant drop in bicycle crashes at stop-controlled intersections from 41 to 28.

➢ There was an increase in bicycle crashes at signalized intersections from 37 to 46.

➢ Further analysis focused on signalized and stop-controlled intersections for 2020-2024 (46 and 28 crashes).

Roadway Characteristics

Travel Lane

sidewalk

Crosswalk

Driveway

SHOPS

Bike lane

BICYCLIST LOCATION AT THE CRASH
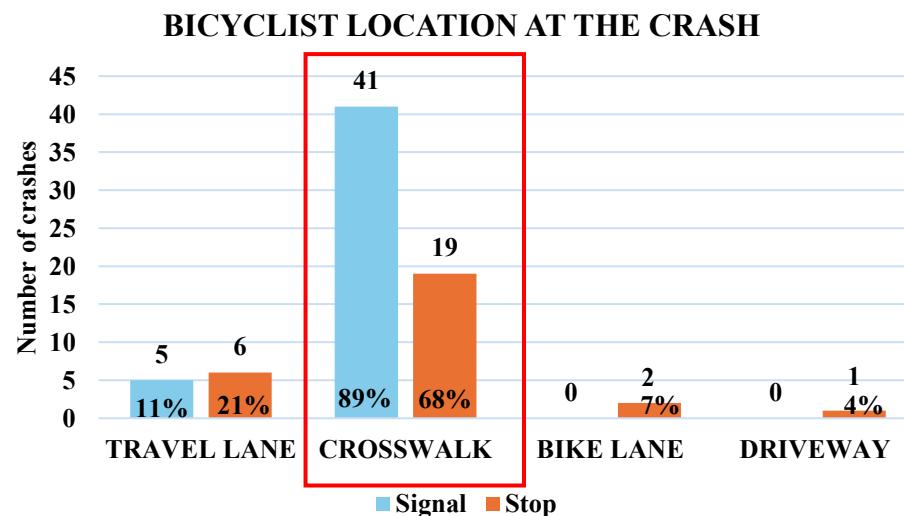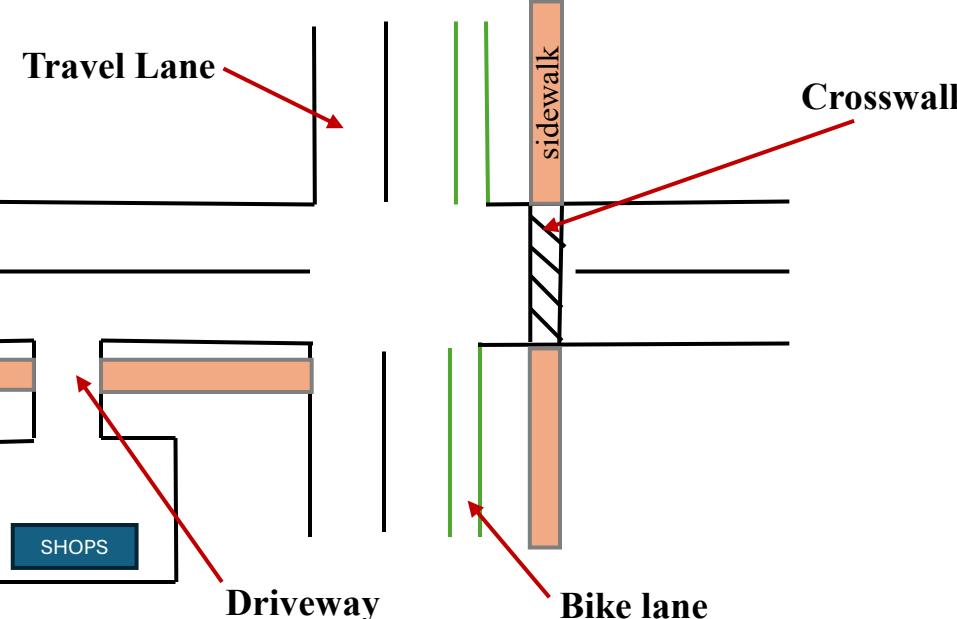
Most of these bicycle crashes occur in crosswalks.

Presence of marked crosswalk	Signal		Stop	
	Count	Percent (%)	Count	Percent (%)
Marked crosswalk	43	93	7	25
Unmarked crosswalk	3	7	21	75
Total	46	100	28	100

Ladder   Longitudinal   Standard

TYPE OF MARKED CROSSWALK
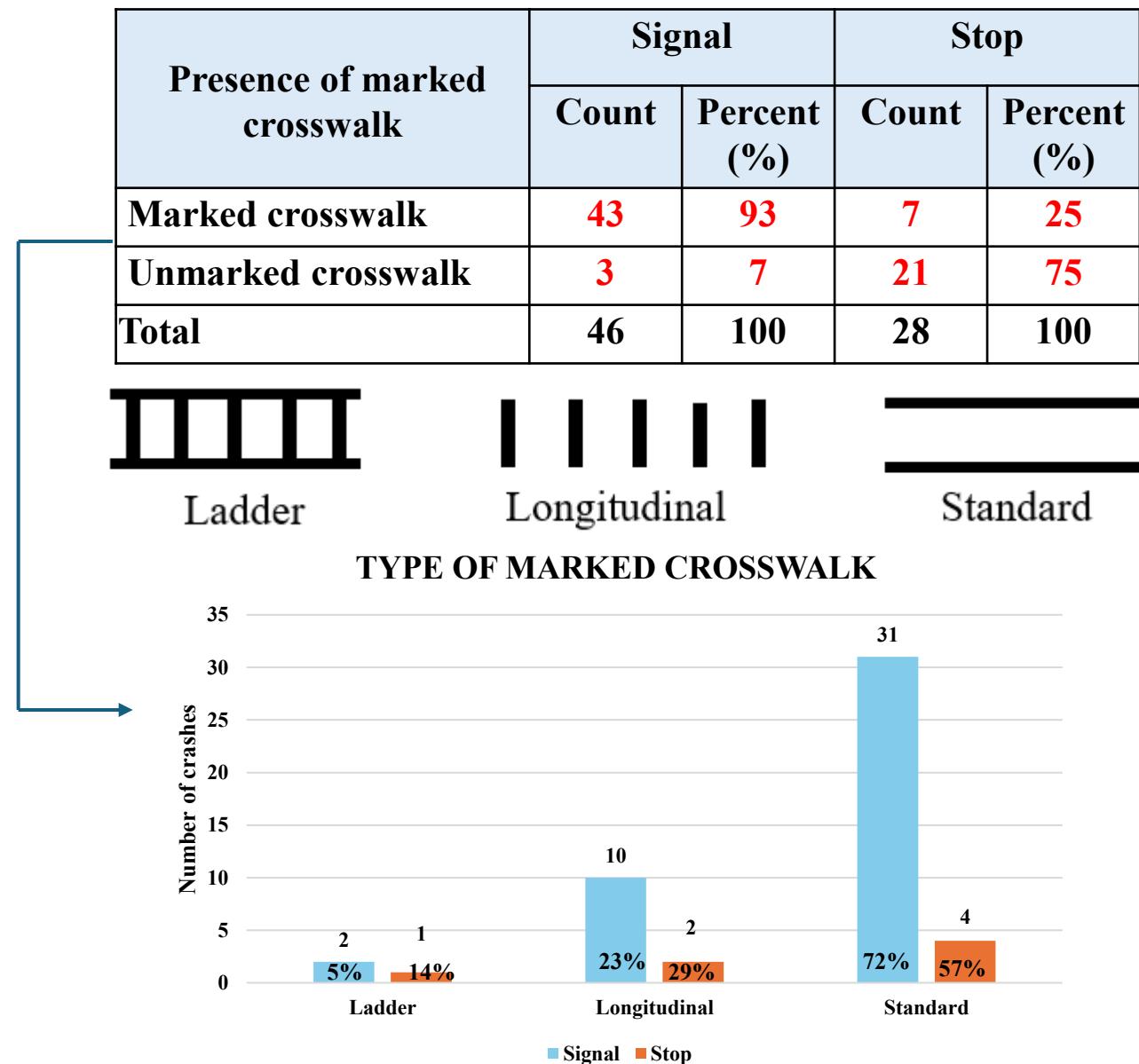
➤ At signalized intersections, crashes are mainly at standard marked crosswalks.

➤ At STOP-controlled intersections, crashes are at unmarked crosswalks.

Serious Injury (A) Crash at E Michigan Ave & Schippers ln Stop

Date:
08/28/2024

The minor road, ie, Schipper Lane has a stop sign.

Diagram
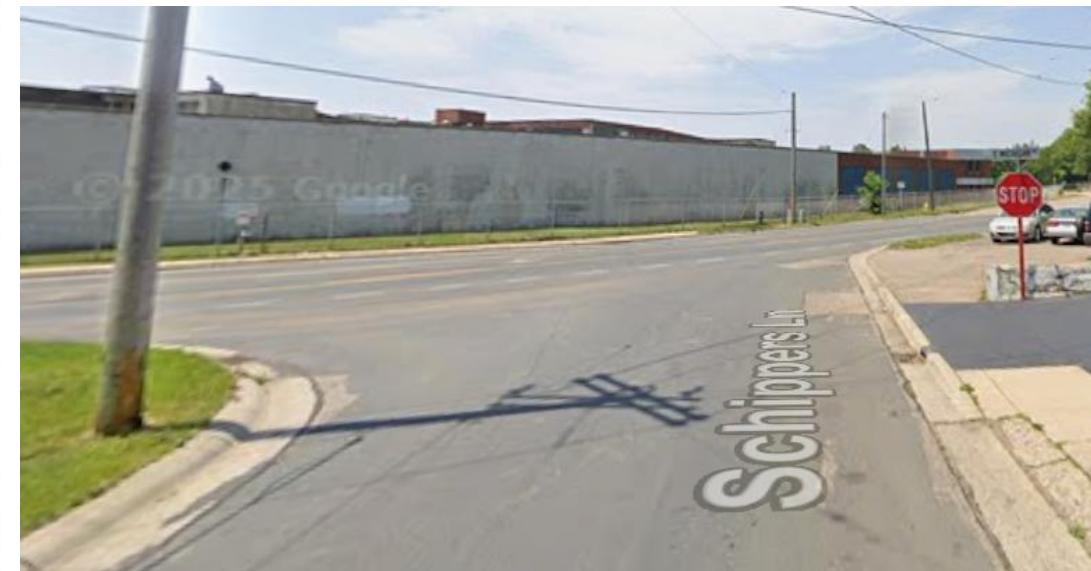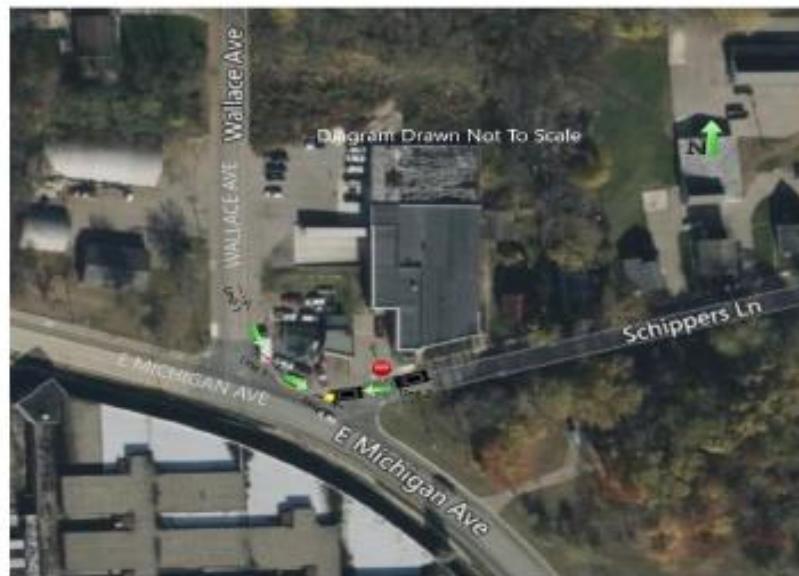
Narrative

Unit 1 stated they were traveling southbound on Wallace Avenue. Unit 1 stated they were crossing through a parking lot onto Michigan Avenue. Unit 1 stated he did not stop and was struck by Unit 2. Unit 2 stated they were stopped at the stop sign on Schippers Lane and Michigan Avenue. Unit 2 stated they began to turn west onto Michigan Avenue. Unit 2 stated she did not see Unit 1 coming through the parking lot. Unit 2 stated they hit Unit 1 and drove Unit 1 to their home. Unit 1 admitted fault for the crash, stating they did not slow for Unit 2. Unit 1 is at fault for the crash for failing to yield to Unit 2 on the roadway.

Denway Dr & S Westnedge Ave (Signalized)

Date:
04/20/2020

Narrative

No suspect hit and run - fail to report Unit 1 advised he was riding his bike north on N Westnedge Ave and was struck by Unit 2 as he was crossing the intersection at Denway Dr. He advised the driver of Unit 1 stopped and asked him if he was ok and he told her he was. He advised she offered to give him a ride somewhere and after he refused she gave him approximately $12 to fix his bike. Unit 1 advised he was not sure if he or Unit 2 had the right of way as he did not remember what the lights were when the accident occured. Unit 2 was discribed as a blue or black sedan driven by an Indian female. She had left the scene prior to officer arrival. No citation was issued or arrest made.

# Riverview St & E Michigan Ave (Signalized)

Date:
06/17/2022

Diagram

Narrative

Unit 2 called on 6/18/22 to report that he was struck by a vehicle last night but he thought he was fine so he did not want police called. Unit 1 also confirmed that he did not want or need police or rescue. Unit 2 was crossing at the crosswalk on his bike and had come from the sidewalk south bound on Riverview. Unit 1 was at the light on E Michigan waiting to turn onto Riverview northbound. She said she looked to her right and did not see anyone then looked back to her left to see if traffic was clear. It was clear so she made a right turn onto Riverview and struck the back tire of Unit 2 bike he was riding. He fell off his bike but got back up and she pulled over to see if he was alright. He said he was and she gave him her number if he needed anything. She suggested he go to the hospital because he had some cuts on his arms but he declined. Due to the incident not being investigated on scene at the time, no citations were issued and no one is being listed as at fault.

Forest Dr & Romence Rd (Signalized)

Date:
06/08/2023
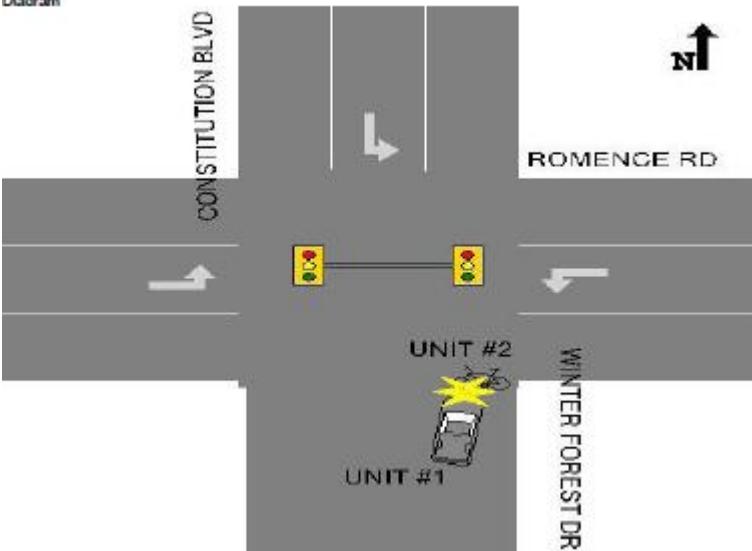
Narrative

UNIT #1 WAS NB ON WINTER FOREST DR / ROMENCE RD STOPPED AT THE TRAFFIC LIGHT ATTEMPTING TO TURN RIGHT (EB). UNIT #2 WAS WB ON A BICYCLE ON THE SIDEWALK ALONG ROMENCE RD APPROACHING THE CROSSWALK AT WINTER FOREST DR. UNIT #1 PULLED OUT INTO THE INTERSECTION AND STRUCK UNIT #2 AS UNIT #2 WAS CROSSING. MINOR INJURIES TO UNIT #2. UNIT #2 TRANSPORTED TO HOSPITAL IN POV. UNIT #1 DRIVEN FROM SCENE.

Gull Rd & Maple Ave (Stop-Controlled)

Date:
07/29/2020

Diagram

Maple Ave.

Gull Rd.

Diagram Drawn Not To Scale
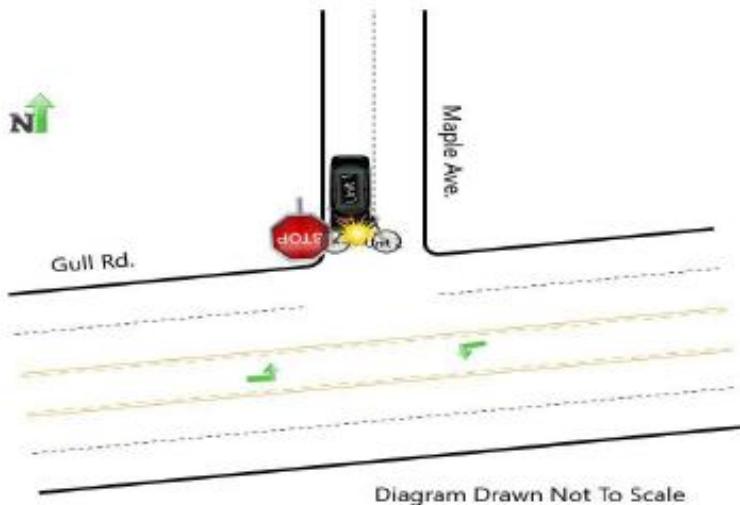
Narrative

Unit 1 was traveling S/B on MAPLE AVE. when the driver stopped at the stop sign. Unit 2 was traveling E/B on the sidewalk on GULL RD. when they saw Unit 1 stopped at the stop sign and continued through the intersection. Unit 1 did not see Unit 2 crossing the intersection and began to turn right hitting Unit 2. Unit 1 was issued a citation for failure to yield.

Portage St & Bryant St (Stop-Controlled)

Date:
09/09/2022

Narrative

Vehicle 2 was on Bryant St headed west at Portage St stopped at the stop sign waiting for traffic to clear. Once it did, she proceeded across the intersection. Unit 1 was on the sidewalk along Portage St headed NB at Bryant St. Unit 1 was travelling too fast to avoid colliding with the side of vehicle 2, crashed into the front seam of the driver side door, flipped up over the roof of the vehicle and smashed through the rear windshield. Unit 1 suffered lacerations to his left forearm. Unit 1 was issued citation #Z489583 for Bicycle Violation.

Clinton Ave & Portage St (Stop-Controlled)

Date:

08/12/2024
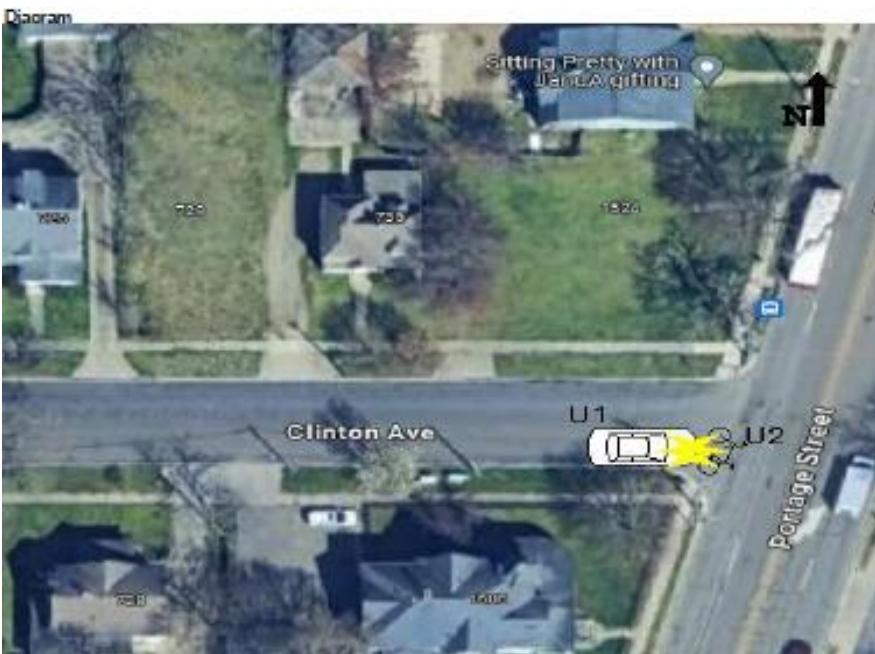
Narrative

Unit 1 was facing westbound on Clinton Ave at the intersection with Portage St.
Unit 2 was a child on a bike northbound on the sidewalk on Portage St. Driver of
Unit 1 stated that Unit 2 popped up in front of him suddenly when he began to roll
forward into the intersection. The driver of Unit 1 stated that he was not sure if he
made contact. Unit 1 driver stated that the mother of Unit 2 yelled at him but did
not exchange information. Driver of Unit 1 stated that mother of Unit 2 took
video/pictures of his vehicle, then continued northbound on Portage. Officers
were unable to locate Unit 2 for interview.

Potential Further Research

Expanded Analysis (all Michigan counties?):

- ✓ Examining the potential contributing factors of crashes involving bicyclists while comparing pre- and post-COVID period.
- ✓ Analyzing contributing factors by crash locations particularly at intersections, driveways, crosswalks and sidewalks.
- ✓ Investigate crashes in midblock locations
- ✓ Investigating crash patterns by time of day, day of week, lighting conditions, etc.
- ✓ Assessing the social demographics of the bicyclists involved in those crashes.
- ✓ Evaluating injury severity with respect to the bicycle infrastructure.
- ✓ Developing a framework for reliably measuring bicycle exposure
- ✓ Recommend countermeasures

TRCLC Research Highlights Videos

- Short video clips highlighting/summarizing WMU TRCLC previous research projects

Disclaimer: Generated using NotebookLM, so the content may not fully reflect every detail or nuance of the original research

- Link: https://www.youtube.com/@JunOh-z9q

- Example of bicycle-related projects:
  - ❑Inside a cyclist's brain (bike simulation)
  - ❑Your ride builds the future (integrating Strava data in models to estimate bicycle volume)
  - ❑ Effectiveness of bicycle signals
  - ❑Sharing the Road: Safe Pass? (study on passing distance)
  - ❑And more