City of Detroit
CITY COUNCIL
LEGISLATIVE POLICY DIVISION
208 Coleman A. Young Municipal Center
Detroit, Michigan 48226
Phone: (313) 224-4946 Fax: (313) 224-4336

TO: The Honorable Detroit City Council

FROM: David Whitaker, Director
Legislative Policy Division Staff

DATE: March 5, 2025

RE: **INSTALLATION OF TOOLS TO PREVENT WRONG-WAY DRIVING ON HIGHWAYS**

City Council Member Mary Waters has requested the Legislative Policy Division (LPD) to produce a report on the installation of tools to prevent wrong-ways drivers on highways.

Wrong-way driving occurs "when a driver, inadvertently or deliberately, drives in the opposite direction of traffic flow along a physically divided highway or its access ramps."[1] According to the Michigan State Police 2023 Statewide Traffic Crash Data Year End Report, there were 420 crashes caused by individuals driving the wrong way on a roadway, with 19 of those crashes resulting in fatality.[2] The Detroit Police Department provided data showing that in 2024, there were 144 wrong-way driving accidents in the City of Detroit, with 97 injuries and one fatality.[3]

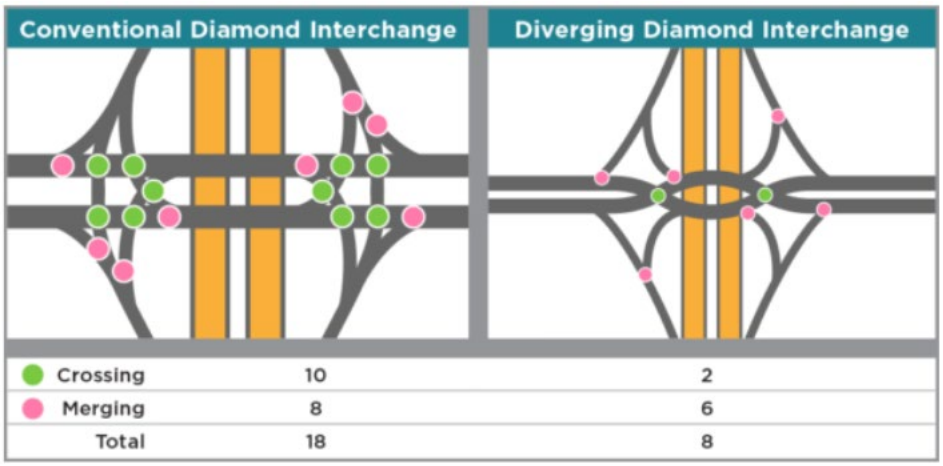
The AAA Foundation for Traffic Safety reports that despite accounting for only 3.7% of all fatal crashes on divided highways between 2010 and 2018, these incidents are far more likely to be fatal

[1] Emerging Safety Countermeasures for Wrong-Way Driving, American Traffic Safety Services Association.
[2] Michigan State Police 2023 Statewide Traffic Crash Data Year End Report - https://www.michigan.gov/msp/-/media/Project/Websites/msp/cjic/Traffic-Crash-Reporting-Unit-Files/CJIC---Annual-Traffic-Crash-Report-Year-End-2023.pdf?rev=3a6dd095a5ee422da3fef05c86522e2d
[3] See spreadsheet below showing 2024 wrong-way driving data from DPD.

because they typically result in head-on collisions.[4] Wrong-way driving fatalities have been trending upward in recent years according to the Federal Highway Administration, increasing from 445 in 2018 to 704 in 2022.[5] The total number of wrong-way incidents may be underrepresented in data due to difficulties in tracking incidents where drivers self-correct or are intercepted by law enforcement before a crash occurs.[6]

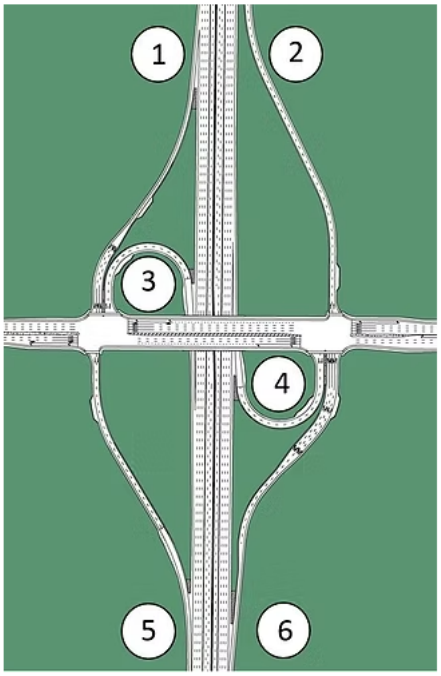
Although wrong-way driving incidents are relatively unpredictable, there are certain trends that illustrate contributing factors to these incidents. For example, 6 in 10 wrong-way crashes between 2010 and 2018 involved an alcohol-impaired driver and the likelihood of wrong-way driving increases as an individual's blood alcohol concentration rises.[7] The age of the drivers plays a factor as well, as drivers over the age of 70 are more likely to be wrong-way drivers, and young drivers under the age of 25 are also overrepresented in wrong-way incidents.[8] Wrong-way drivers are also more likely to have a suspended, revoked, or expired license or have a license from out of state. Crashes resulting from wrong-way driving also appear to occur more often when it is dark and particularly in the early morning hours, with one Florida department of transportation study showing that more than half of wrong-way crashes occurred between midnight and 6 a.m..[9]

Wrong-way driving incidents are most likely to occur at exit ramp terminals, meaning exit ramps have to be given special consideration when investigating efforts to reduce the number of incidents. The type of interchange where exit ramps are located also appears to play a factor in the frequency of wrong-way driving incidents. For example, one study analyzing 6 years of crash data in Illinois found that most wrong-way driving crashes occurred at compressed diamond and diamond interchanges.[10]



[4] AAA Foundation for Traffic Safety Research Brief, Fatal Wrong-Way Crashes on Divided Highways - https://aaafoundation.org/wp-content/uploads/2021/03/20-1347-AAAFTS-Wrong-Way-Driving-Brief-FNL-CX.pdf
[5] https://highways.dot.gov/safety/intersection-safety/about
[6] Enterprise Transportation Pooled Fund Study, Countermeasures for Wrong-Way Driving on Freeways - https://enterprise.prog.org/Projects/2013/wrongway/ENT_Countermeasures_WrongWayDriving_FINAL_Sept2016.pdf
[7] AAA Foundation for Traffic Safety Final Report, Fatal Wrong-Way Crashes on Divided Highways - https://aaafoundation.org/wp-content/uploads/2021/03/20-1347-AAAFTS-Wrong-Way-Driving-Brief-FNL-CX.pdf
[8] *Id.;* Iowa State University Center for Transportation Research and Education, Investigation of Wrong-Way Driving Final Report 2018 - https://www.intrans.iastate.edu/wp-content/uploads/2019/04/wrong-way_driving_investigation_w_cvr.pdf
[9] Florida Department of Transportation, Statewide Wrong-Way Crash Study April 2015 - https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/research/reports/statewide-wrong-way-crash-study.pdf?sfvrsn=e905dafb_2mi
[10] Zhou, H., J. Zhao, R. Fries, M. Reisi Gahrooei, L. Wang, B. Vaughn, K. Bahaaldin, and B. Ayyalasomayajula. 2012. Investigation of Contributing Factors Regarding Wrong-Way Driving on Freeways. Illinois Center for Transportation, University of Illinois, Urbana, IL.

Another study analyzing the characteristics of wrong-way driving crashes on Michigan freeways determined that partial cloverleaf interchanges were the origination points for 60% of all wrong-way driving crashes despite representing only 21% of all interchanges in Michigan.[11]



Partial Cloverleaf Interchange

Aside from driver error and/or impairment, "studies have also found that inconsistency in location, angles, and size of wrong-way related traffic signs, lack of pavement markings, and improper geometric design are contributing factors."[12] State and local agencies have been implementing and testing countermeasures for wrong-way driving for decades, including (1) changing the size, location, and angle of wrong-way related signs, (2) proper use of conventional and innovative pavement markings, (3) implementing proper geometric elements (raised medians, channeling islands, and control radii at intersections), and (4) application of Intelligent Transportation Systems (ITS).[13] Below is a table of the most commonly implemented wrong-way driving countermeasures:[14]

[11] Morena, D. A. and T. J. Leix. 2012. Where These Drivers Went Wrong. Public Roads, Vol. 75, No. 6.
[12] Emerging Safety Countermeasures for Wrong-Way Driving, *supra.*
[13] *Id.*
[14] Monsere, C., S. Kothuri, and A. Razmpa. 2017. Wrong Way Driving Analysis and Recommendations. Portland State University Department of Civil and Environmental Engineering, Portland, OR.

Table 2. Wrong-way driving countermeasures

Signs	Pavement markings	Geometric designs	ITS technologies
Oversized signs	Wrong-way arrows	Channelizing islands	Sensors
Lower-mounted signs	Red raised pavement markings	Extended raised median or longitudinal channelizing devices	Traffic management venter to inform law enforcement and incident responders
Multiple signs	Stop lines	Narrowing the exit ramp terminal throat	
Standard packages of wrong-way signs	Dotted lane line extensions	Widening the entrance ramp terminal throat	Dynamic signs to warn drivers: LED/RRFBs illuminated wrong-way signs, changeable message signs (CMS) in-pavement warning lights
Entrance Freeway sign at entrance ramps	Delineations	Controlled corner radius: Angular corner at left-side of exit ramp	
Retroreflective strips, fluorescent red sign sheeting, or flashing beacons	Turn or through lane arrows		
	ONLY marking	Open sight distance and uniform lighting levels at ramp terminal	

There is no uniform way to address wrong-way driving, solutions must be analyzed for each particular intersection and jurisdiction "by carefully observing the feasibility, applicability, implementation, and associated cost" of the mitigation tools available.[15] Some cases may require a combined approach to address human factors through education campaigns and enforcement.

The use of a DO NOT ENTER sign is the most common countermeasure for wrong-way driving, and the Manual on Uniform Traffic Control Devices (MUTCD) asserts that these signs shall be placed wherever traffic is prohibited from entering a restricted roadway. These signs should be placed in such a manner that the angle and height ensure maximum visibility to potential wrong-way drivers. The California Department of Transportation successfully experimented with lowering the height of DO NOT ENTER signs to increase visibility, reducing the frequency of incidents from 50-60 per month to 2-6 per month at some problem ramps.[16] The typical minimum MUTCD height for signs in urban areas is 7 feet, and lowering the height may not be feasible in urban areas where parked vehicles, pedestrians, and other obstructions could block the sign from drivers.

Because studies have shown that the vast majority of wrong-way driving incidents occur at night, there is a need to address these conditions by making warning signs more conspicuous. Adding reflective material to sign supports as well as the road itself can be an effective and inexpensive remedial measure that can be installed relatively quickly.

In addition to the reflective sheeting that is illuminated by vehicle headlights, attaching solar LED lights to the borders of the sign can make it more visible from a distance during dark conditions. The Texas Department of Transportation identified the freeway corridor with the highest number of incidents of wrong-way driving incidents and installed flashing LED border WRONG WAY signs along the corridor. Over the course of one year, wrong-way driving incidents dropped by 30% with a high benefit-cost ratio and a projected cost recovery time of 1.5 years.[17] Using red retroreflective strips on sign supports and red retroreflective raised pavement markers (RRPMs) are also cost-effective countermeasures.

In addition to marking and signs, geometric elements such as raised medians and channelizing islands can be installed to control access by impeding or preventing drivers from entering exit ramps the

[15] Investigation of Wrong-Way Driving Final Report 2018, *Supra.*
[16] Coplean, J. E. 1989. Prevention of Wrong-Way Accidents on Freeways. California Department of Transportation (Caltrans) Division of Traffic Operations, Sacramento, CA.
[17] Investigation of Wrong-Way Driving Final Report 2018, *Supra.*

wrong way. Where they are appropriate, channelizing devices, curbs, and islands can be highly effective at preventing access to exit ramps from the wrong direction and make it more obvious to the driver that they are driving in the opposite direction of traffic.[18] The installation of permanent curbs or islands is a much more expensive approach than improvements to signs, warnings, and markers. This approach is also more labor-intensive and time consuming, although it may be the most effective method for particular types of interchanges.

Surface-mounted vertical longitudinal channelizing devices can be used as a low-cost countermeasure to address various needs, including controlling access to prevent wrong-way driving. These devices can range from the continuous barriers often seen on major roads to control traffic during construction to the thin, separated vertical tubes separating traffic lanes or bike lanes on surface streets. MDOT targeted 161 partial cloverleaf interchanges across the state with low-cost signing and marking enhancement to reduce the number of wrong-way driving incidents, which were more frequent at those type of interchanges. MDOT determined that the interchange in Gratiot Avenue along Interstate 94 in Detroit needed additional mitigation, as 10 of the 35 total wrong-way driving crashes in their study originated at that interchange and those crashes did not primarily occur at night or involve mainly impaired drivers. MDOT installed a combination of raised and vertical longitudinal channelization between the left-turn lane and the opposing direction of traffic as a physical barrier to entering the exit ramp from the wrong direction. The treatment was able to be installed immediately without significant modification to the intersection and eliminated wrong-way driving incidents at the interchange.

Figure 16. Application of Longitudinal Channelizers in Restriction of Wrong-way Left-Turn (Image: MDOT)

Intelligent Transportation System (ITS) technologies have been used by many transportation agencies as wrong-way driving countermeasures. These systems utilize devices such as cameras and radar or infrared to automatically detect when a driver enters a roadway from the wrong direction. Once the system is triggered, it will employ some type of warning, often in-pavement warning lights, flashing wrong-way signs, warning lights, or dynamic messaging signs. These warnings may also inform oncoming drivers in addition to the wrong-way driver, and may also be integrated to alert law enforcement so that they can attempt to intercept the vehicle before a crash occurs. These systems tend to be relatively expensive, and the cost varies depending on the technology used. Even so, they have been successfully implemented by various agencies to address areas that have experienced fatal wrong-way crashes.

[18] Zhou, H., & Rouholamin, M. P. (2014a). Guidelines for reducing wrong-way crashes on freeways.

Systems that activate flashing beacons around WRONG WAY signs when a wrong-driver triggers a sensor have been shown to be highly effective.[19] MDOT worked with the Michigan State Police and the city of Grand Rapids to install several of these systems along US-131 between Ann Street and M-11 in Grand Rapids after a series of fatal crashes.[20] In 2024, MDOT announced plans to install several of these detection systems throughout Wayne and Oakland counties, also in response to a series of fatal crashes in recent years. These detection systems are located at EB I-696 at Woodward, WB I-696 at Woodward, SB I-375 at Larned, SB I-375 at Monroe, SB I-375 at Madison, NB I-75 at Mack, SB I-75 at Mack, and SB I-75 at Warren.[21]

Given the large number of wrong-way driving incidents that occur as a result of impaired driving, the issue goes beyond design principles. While geometric design elements making it difficult to enter exit ramps from the wrong direction and automated flashing lights may be effective at deterring even an impaired driver, they are not likely to prevent every incident. Addressing the issue of impaired driving requires a variety of policy solutions including public outreach and education to emphasize the dangers of driving while impaired. It also requires enforcement of the laws prohibiting impaired driving, including the installation of ignition interlock devices on vehicles which prevent them from starting if the driver has a measurable amount of alcohol in their system. Investments into affordable and efficient public transit systems is also likely to reduce impaired driving and traffic collisions in general by reducing the number of drivers on the road, particularly in the early morning hours when wrong-way driving incidents tend to occur.

MDOT has a duty to ensure that the roadways under its control are safe for travel.[22] The majority of wrong-way driving incidents occur or originate on freeway exit ramps, and MDOT is primarily responsible for the maintenance of those exit ramps. According to MDOT, it has taken the following actions over the last several years to reduce wrong-way driving incidents:

- Added reflective strips to "Do Not Enter" and "Wrong Way" signposts.
- Added "backside" red reflective strips along the length of the off ramps.
- Added stop bars and turn arrows at the ramp approaches, in addition to wrong way arrows placed further back.
- Added turning guideline markings at ramps where the on and off ramps are adjacent to each other.
- Painted curbed islands at ramp terminals.
- Lowered "Do Not Enter" signs to improve headlight angles.

Many of these improvements were targeted to address the partial cloverleaf intersections that MDOT found contributed to the majority of wrong-way driving incidents, as discussed above. MDOT is continually studying the issue of wrong-way driving and is developing both long and short-term plans to address the issue throughout the state, according to MDOT spokeswoman Diane Cross.[23]

It is unlikely that wrong-way driving incidents can be eliminated in the foreseeable future. However, MDOT should strive to address every roadway and interchange that is susceptible to wrong-

[19] Lin, P. S., Ozkul, S., Guo, R., & Chen, C. (2018). Assessment of countermeasure effectiveness and informativeness in mitigating wrong-way entries onto limited-access facilities. Accident Analysis & Prevention, 116, 79-93.
[20] https://www.michigan.gov/mdot/news-outreach/pressreleases/2023/11/27/efforts-increase-to-stop-wrong-way-driving
[21] https://www.fox2detroit.com/news/wrong-way-driver-detection-coming-to-3-metro-detroit-freeways-how-it-works
[22] MCL 691.1402.
[23] https://www.freep.com/story/news/local/michigan/detroit/2024/07/31/wrong-way-driving-crashes-in-michigan/74606957007/

way driving incidents and address the issue as quickly as possible using the best practices and design principles available. Because MDOT has jurisdiction over the freeways and exit ramps that intersect with Detroit, requests for safety studies and for wrong-way driving mitigation at specific locations should be communicated to MDOT so that the City and MDOT can coordinate efforts and identify potential funding sources to address dangerous interchanges as soon as possible.

Please contact our office if we can be of any further assistance.

Detroit Wrong-Way Driving Data 2024

Crash Date and Tim	County Name	City Township Nam	Primary Street	Wrong Way Involve	# of Fatalities	# of A Injurie	# of B Injurie	# of C Injuries
1/8/2024 8:01	Wayne	Detroit	LONYO ST	Yes	0	0	0	0
1/12/2024 14:30	Wayne	Detroit	HERN	Yes	0	0	0	0
1/27/2024 2:05	Wayne	Detroit	SHELBY	Yes	0	0	0	0
1/30/2024 15:48	Wayne	Detroit	KLINGER	Yes	0	0	0	0
2/4/2024 4:00	Wayne	Detroit	GODDARD	Yes	0	0	0	0
2/6/2024 17:15	Wayne	Detroit	MILWAUKEE	Yes	0	0	0	0
2/10/2024 0:13	Wayne	Detroit	TIREMAN AVE	Yes	0	0	0	0
2/10/2024 3:00	Wayne	Detroit	RAMP 215D	Yes	0	0	0	0
2/15/2024 11:52	Wayne	Detroit	MCNICHOLS	Yes	0	0	0	0
2/16/2024 2:10	Wayne	Detroit	LARNED	Yes	0	0	2	2
2/16/2024 8:00	Wayne	Detroit	SPENCER ST	Yes	0	0	0	1
2/17/2024 3:55	Wayne	Detroit	HARPER	Yes	0	0	0	0
2/17/2024 19:25	Wayne	Detroit	E I 96 SERVICE DRIVE	Yes	0	0	0	1
2/18/2024 12:00	Wayne	Detroit	ROSA PARKS	Yes	0	0	0	3
2/18/2024 20:15	Wayne	Detroit	BYRON	Yes	0	0	0	1
2/19/2024 2:30	Wayne	Detroit	GRATIOT	Yes	0	0	0	0
2/20/2024 16:15	Wayne	Detroit	BALTIMORE	Yes	0	0	0	0
2/23/2024 13:30	Wayne	Detroit	MAPLERIDGE	Yes	0	0	0	0
2/24/2024 9:25	Wayne	Detroit	GRAND RIVER	Yes	0	1	2	0
2/24/2024 15:15	Wayne	Detroit	HENRY	Yes	0	0	0	0
3/9/2024 2:20	Wayne	Detroit	CHALMERS ST	Yes	0	0	1	0
3/10/2024 4:00	Wayne	Detroit	8 MILE	Yes	0	0	0	0
3/10/2024 19:30	Wayne	Detroit	7 MILE	Yes	0	0	0	1
3/13/2024 18:40	Wayne	Detroit	WARREN ST	Yes	0	1	1	0
3/16/2024 16:28	Wayne	Detroit	W WARREN AVE	Yes	0	0	0	1
3/16/2024 17:05	Wayne	Detroit	SHIELDS	Yes	0	0	0	0
3/17/2024 17:43	Wayne	Detroit	STATE FAIR E	Yes	0	0	0	0
3/18/2024 16:45	Wayne	Detroit	S I 75 SERVICE DRIVE	Yes	0	0	0	0
3/24/2024 0:55	Wayne	Detroit	ROSA PARKS	Yes	0	0	4	0
3/25/2024 22:11	Wayne	Detroit	JOY	Yes	0	1	0	0
3/28/2024 8:00	Wayne	Detroit	JOHN R	Yes	0	0	0	0
3/28/2024 13:39	Wayne	Detroit	WARREN	Yes	0	0	1	0
3/29/2024 2:30	Wayne	Detroit	OUTER	Yes	0	0	0	0
3/29/2024 8:45	Wayne	Detroit	JOHN R	Yes	0	0	0	1
3/29/2024 19:30	Wayne	Detroit	KEYSTONE	Yes	0	0	0	0
4/2/2024 13:20	Wayne	Detroit	JUNCTION	Yes	0	0	0	0
4/3/2024 8:00	Wayne	Detroit	STRATHMOOR	Yes	0	0	0	0
4/5/2024 7:34	Wayne	Detroit	GRAND	Yes	0	0	0	1
4/5/2024 17:20	Wayne	Detroit	ROBINWOOD	Yes	0	0	0	0
4/9/2024 0:28	Wayne	Detroit	GRATIOT AVE	Yes	0	0	0	0
4/13/2024 15:00	Wayne	Detroit	WARREN	Yes	0	1	0	2
4/17/2024 16:38	Wayne	Detroit	STOTTER ST	Yes	0	0	0	0
4/20/2024 17:10	Wayne	Detroit	GREENFIELD	Yes	0	0	0	2
4/24/2024 23:00	Wayne	Detroit	MICHIGAN	Yes	0	0	0	1
4/27/2024 18:20	Wayne	Detroit	8 MILE	Yes	0	0	0	0
4/29/2024 20:57	Wayne	Detroit	FENKELL ST	Yes	0	0	0	2
5/1/2024 23:04	Wayne	Detroit	ENDICOTT	Yes	0	0	0	0
5/6/2024 1:20	Wayne	Detroit	GRAND RIVER AVE.	Yes	0	0	1	0
5/11/2024 22:00	Wayne	Detroit	OUTER	Yes	0	0	0	0
5/16/2024 4:00	Wayne	Detroit	PLYMOUTH RD	Yes	0	0	0	0
5/16/2024 11:40	Wayne	Detroit	ANGLIN	Yes	0	0	0	0
5/16/2024 22:00	Wayne	Detroit	MERRILL AVE	Yes	0	0	0	2
5/19/2024 22:05	Wayne	Detroit	CONLEY	Yes	0	0	0	2
5/20/2024 22:51	Wayne	Detroit	HARPER AVE	Yes	0	0	0	0
5/23/2024 16:15	Wayne	Detroit	HOUSTON WHITTIER S	Yes	0	0	1	0
5/24/2024 11:15	Wayne	Detroit	CADET	Yes	0	0	0	0
5/26/2024 5:00	Wayne	Detroit	LOUSIANA ST	Yes	0	0	0	0
5/26/2024 21:00	Wayne	Detroit	CENTRAL	Yes	0	0	0	1
6/2/2024 3:58	Wayne	Detroit	RAMP 123A	Yes	0	0	0	2
6/5/2024 1:00	Wayne	Detroit	GRAND RIVER	Yes	0	0	3	1
6/5/2024 16:00	Wayne	Detroit	WOODROW WILSON	Yes	0	0	0	1
6/7/2024 12:50	Wayne	Detroit	MCGRAW	Yes	0	0	0	2
6/8/2024 6:40	Wayne	Detroit	GRATIOT	Yes	0	0	0	0
6/10/2024 7:48	Wayne	Detroit	HARTWELL	Yes	0	0	0	1
6/12/2024 3:10	Wayne	Detroit	FAIRVIEW	Yes	0	0	0	0
6/12/2024 22:30	Wayne	Detroit	MORANG	Yes	0	0	0	0
6/17/2024 14:00	Wayne	Detroit	JOHN R	Yes	0	0	0	0
6/18/2024 13:25	Wayne	Detroit	GALLAGHER	Yes	0	0	0	1
6/18/2024 14:35	Wayne	Detroit	GRIXDALE ST	Yes	0	0	0	0
6/19/2024 1:50	Wayne	Detroit	KERCHEVAL ST	Yes	0	0	0	0
6/24/2024 13:15	Wayne	Detroit	HUBBELL	Yes	0	0	0	1
6/29/2024 23:00	Wayne	Detroit	NEVADA	Yes	0	0	0	0
6/30/2024 2:30	Wayne	Detroit	MICHIGAN	Yes	0	0	0	1

7/3/2024 20:50	Wayne	Detroit	OUTER	Yes	0	0	0	0
7/4/2024 20:00	Wayne	Detroit	PEARL ST	Yes	0	0	0	0
7/6/2024 0:34	Wayne	Detroit	SPENCER	Yes	0	0	0	0
7/11/2024 13:30	Wayne	Detroit	STANSBURY	Yes	0	0	0	0
7/16/2024 14:50	Wayne	Detroit	ROSA PARKS	Yes	0	0	0	0
7/19/2024 1:45	Wayne	Detroit	CARDONI	Yes	0	0	0	0
7/20/2024 2:47	Wayne	Detroit	FORT	Yes	0	0	0	2
7/20/2024 13:36	Wayne	Detroit	29TH	Yes	0	0	0	0
7/26/2024 0:00	Wayne	Detroit	FAIRVIEW	Yes	0	0	0	0
7/28/2024 3:45	Wayne	Detroit	SANTA CLARA ST	Yes	0	0	0	0
8/7/2024 10:24	Wayne	Detroit	CADIEUX	Yes	0	0	0	0
8/8/2024 16:04	Wayne	Detroit	ALPINE ST	Yes	0	0	0	0
8/8/2024 17:00	Wayne	Detroit	VAN DYKE	Yes	0	0	0	0
8/9/2024 19:31	Wayne	Detroit	DEQUINDRE	Yes	0	0	0	2
8/18/2024 23:39	Wayne	Detroit	PATTON	Yes	0	0	0	1
8/23/2024 21:37	Wayne	Detroit	HALLECK	Yes	0	0	0	2
8/24/2024 2:45	Wayne	Detroit	S I 375	Yes	0	0	0	0
8/29/2024 11:50	Wayne	Detroit	VIRGINIA PARK	Yes	0	0	0	0
8/29/2024 23:46	Wayne	Detroit	MICNICHOLS	Yes	0	0	0	1
9/6/2024 8:25	Wayne	Detroit	DAVISON	Yes	0	0	0	0
9/7/2024 19:40	Wayne	Detroit	OUTER	Yes	0	0	0	0
9/8/2024 0:29	Wayne	Detroit	MOUND	Yes	0	0	0	0
9/8/2024 20:24	Wayne	Detroit	8 MILE	Yes	0	0	1	1
9/10/2024 3:00	Wayne	Detroit	STENDER	Yes	0	0	0	0
9/10/2024 3:10	Wayne	Detroit	W I 96	Yes	0	0	0	1
9/12/2024 21:15	Wayne	Detroit	ANGLIN ST	Yes	0	0	1	0
9/13/2024 0:00	Wayne	Detroit	7 MILE	Yes	0	0	0	0
9/14/2024 11:30	Wayne	Detroit	DAVISON	Yes	0	0	0	0
9/25/2024 23:00	Wayne	Detroit	CASINO	Yes	0	0	0	1
9/27/2024 8:17	Wayne	Detroit	JOSEPH CAMPAU	Yes	0	0	0	1
10/2/2024 19:40	Wayne	Detroit	MORRELL	Yes	0	0	0	0
10/4/2024 13:05	Wayne	Detroit	SPENCER	Yes	0	0	0	0
10/4/2024 16:30	Wayne	Detroit	MARX	Yes	0	0	0	0
10/5/2024 21:43	Wayne	Detroit	SYRACUSE ST	Yes	0	0	0	0
10/10/2024 1:18	Wayne	Detroit	JEFFERSON	Yes	0	0	1	3
10/11/2024 2:30	Wayne	Detroit	CHALMERS	Yes	0	0	0	0
10/14/2024 8:27	Wayne	Detroit	LANTZ	Yes	0	0	0	0
10/18/2024 3:00	Wayne	Detroit	I-375	Yes	0	1	1	1
10/18/2024 21:45	Wayne	Detroit	GRATIOT	Yes	0	0	0	0
10/25/2024 16:26	Wayne	Detroit	PARK	Yes	0	0	0	1
10/26/2024 22:28	Wayne	Detroit	GARVIN ST	Yes	0	0	1	1
10/27/2024 3:00	Wayne	Detroit	GRATIOT	Yes	0	0	0	0
10/31/2024 10:59	Wayne	Detroit	N I 75 SERVICE DRIVE	Yes	0	0	0	0
11/1/2024 19:57	Wayne	Detroit	OUTER	Yes	0	0	2	0
11/9/2024 13:15	Wayne	Detroit	RAMP 035F	Yes	0	0	0	0
11/12/2024 18:00	Wayne	Detroit	S M 10	Yes	0	0	0	0
11/12/2024 18:00	Wayne	Detroit	N M 10	Yes	0	0	0	0
11/13/2024 10:55	Wayne	Detroit	GRATIOT	Yes	0	0	0	1
11/15/2024 20:00	Wayne	Detroit	HOLBROOK	Yes	0	0	0	0
11/16/2024 0:00	Wayne	Detroit	LAHSER	Yes	0	0	0	1
11/16/2024 21:10	Wayne	Detroit	DAVISON	Yes	0	0	0	3
11/16/2024 22:22	Wayne	Detroit	FREELAND ST	Yes	0	0	0	0
11/17/2024 2:00	Wayne	Detroit	ADAMS W	Yes	0	0	0	0
11/18/2024 3:50	Wayne	Detroit	W I 96	Yes	0	0	0	0
11/20/2024 12:30	Wayne	Detroit	2ND	Yes	0	0	0	0
11/21/2024 17:00	Wayne	Detroit	RAMP 215I	Yes	0	0	0	0
11/22/2024 0:00	Wayne	Detroit	ROBINWOOD	Yes	0	0	0	2
11/23/2024 11:55	Wayne	Detroit	8 MILE	Yes	0	0	0	1
12/7/2024 4:38	Wayne	Detroit	S M 10	Yes	0	0	0	0
12/7/2024 4:41	Wayne	Detroit	S M 10	Yes	0	0	3	1
12/7/2024 4:41	Wayne	Detroit	S M 10	Yes	1	1	0	0
12/8/2024 1:00	Wayne	Detroit	RIVARD	Yes	0	0	0	0
12/8/2024 22:30	Wayne	Detroit	GRATIOT AVE	Yes	0	0	0	0
12/10/2024 15:26	Wayne	Detroit	EATON	Yes	0	0	1	0
12/16/2024 20:27	Wayne	Detroit	7 MILE	Yes	0	0	0	0
12/19/2024 16:03	Wayne	Detroit	MCNICHOLS	Yes	0	0	0	1
12/20/2024 17:20	Wayne	Detroit	PLYMOUTH	Yes	0	0	0	0
12/28/2024 0:55	Wayne	Detroit	FOREST	Yes	0	0	0	0
12/28/2024 1:19	Wayne	Detroit	MCNICHOLS	Yes	0	0	0	2
12/28/2024 21:30	Wayne	Detroit	DEQUINDRE ST	Yes	0	0	0	0
12/31/2024 20:45	Wayne	Detroit	REVERE	Yes	0	0	0	0