TO: NJ Target Zero Action Plan Working Group Members
FROM: targetzero@rutgers.edu
August 8, 2025

Memorandum: Draft Safer Vehicles Actions

Instructions

This document contains a draft version of **Safer Vehicles** actions for the New Jersey Target Zero Comprehensive Safety Action Plan.

The purpose of this draft is to invite constructive input, particularly from Working Group members who have actively contributed to the development of these ideas. The actions outlined here were informed by submissions to the Target Zero Input Form, feedback from breakout discussions at previous meetings, and comments submitted via email to the Commission or Working Group. Actions are not listed in any priority or order.

This is a working draft that is **intentionally incomplete**. It is shared to invite input and ensure that additional perspectives help shape the details of each action item.

Comments are due by **5pm on Friday, August 22, 2025.**

Comments will be reviewed and incorporated, where appropriate, into the draft actions. **Not all actions listed will necessarily be included in the final action plan.** Final prioritization and inclusion of actions will be at the discretion of the agency members of the New Jersey Target Zero Commission.

How to Comment on Actions

- Comments are public and attributed to an Adobe-enabled account or a guest account with Adobe.
- To support precise feedback, all pages include both page numbers and line numbers for easy reference.
- You may also send comments via email to targetzero@rutgers.edu. Comments made via email should specify the page and line numbers.

Comments are encouraged to include, but are not limited to:

- Reactions to the text and suggestions for edits.
- Suggestions for new directions for specific actions.
- Additional leads on examples, similar programs, research, or other resources.
- Constructive criticism of the actions and their ability to be implemented.
- Suggestions on how best to involve Commission member agencies and other agencies or organizations, either as the lead oversight agency or in a supportive capacity.

- Assistance in determining the appropriate cost, timeframe, priority, and evaluation strategy.
    - Timeframes should be considered with respect to these draft ranges:
        - **Immediate:** Under 1 year
        - **Short:** 1–3 years
        - **Medium:** 4–8 years
        - **Long:** More than 8 years
    - Cost, priority, and evaluation criteria are more variable and are undergoing additional development. If you would like to comment on these, please provide details to help categorize these action item criteria.

If you feel Safer People actions are missing from this list, you can submit ideas through the Target Zero Input Form or via email to targetzero@rutgers.edu **no later than 5pm on Friday, August 22, 2025**.

Each action comprises of the following:

1. A table of criteria for organization of key information, such as relevant objectives, potential lead and partner agencies and organizations, etc.,
2. A description of the action item, comprising of one or more specific actions,
3. Notes, which provide relevant background information and a summary of findings from staff and student research.

This draft is one of multiple anticipated documents to be shared with the working group. Draft Actions are intended to be shared via link by primary objective:

The Safe System Approach

- Safer People
- Safer Roads
- Safer Speeds
- Safer Vehicles
- Post-Crash Care
- Additional Priorities
    - Safer Land Use
    - Better Funding Processes
    - More Technical Assistance
    - Better Data and Evaluation
    - More Efficient Project Delivery

Contents

Autonomous Vehicles and Delivery Robots

Action Item	Autonomous Vehicles and Delivery Robots
Key Objective	Safer Vehicles
Other Objectives	
Lead Agency	
Support Agencies	
Other Partners	
Action Type	Legislative
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Develop and enact an autonomous vehicle (AV) and delivery robot laws that clarifies the definition of AVs and delivery robots, their use, and liability.
- Ensure the legislation complies with federal safety standards and state traffic laws.
- Promote the testing and piloting of AVs before they enter the roadway.
- Join with advocacy organizations, state agencies, and industry stakeholders to advance AV policy.

Notes

Autonomous vehicles (AVs), requiring little to no human input, present some challenges when interacting with pedestrians and other vehicles. Drivers often do not know how to interact with AVs, heightening the chance of crashes. One study reveals that low-speed automated shuttles (LSAVs) may increase the risk of overtaking and multi-threat passing, thereby increasing the likelihood of pedestrian-involved crashes, sideswipe crashes, and rear-end crashes. The study notes that LSAV speeds more consistent with surrounding traffic and improved communication interfaces can mitigate some of these challenges. The lack of public trust in AVs is another barrier that prevents safer interactions with them. Despite this, if manufactured and regulated correctly, AVs are projected to reduce fuel consumption and congestion and improve crash avoidance.

Although there is no federal legislation on AVs, only federal guidelines, several states have enacted AV laws. The New Jersey legislature has introduced several bills, but none have been passed into law. The state enacted an Advanced Autonomous Vehicle Task Force in 2019 to evaluate AV safety and offer recommendations. The Task Force's unpublished report proposes an enabling framework for autonomous vehicles in New Jersey. Recommendations include:

- Establishing a highly automated vehicle (HAV) Interagency Committee to monitor HAV testing and operation in the state;
- Establishing a two-step permitting process to allow companies to test and deploy HAVs on public roadways in New Jersey, including an "HAV Testing Permit" and an "HAV Deployment Certificate";
- Requiring prospective HAV Operators to verify that their HAVs comply with all applicable traffic and motor vehicle laws in the state;
- Requiring that HAV Testers meet with the HAV Interagency Committee and local officials on a quarterly basis to discuss performance results, and requiring HAV Testers to submit an annual data report;
- Creating a special class of registration and licensing for HAVs;
- Creating a single point of contact for companies wishing to test and deploy HAVs in New Jersey; and
- Promoting public acceptance of HAV technologies and creating a culture of HAV learning, collaboration, and problem solving.

Despite this proposed framework, in the absence of a specific AV statute, AV operation applies to existing motor vehicle laws in New Jersey. Establishing a specific AV policy is important as the technology advances and more AVs are introduced onto roadways.

Other states have enacted robust AV legislation. Some states, such as California, only permit the testing or piloting of AVs by manufacturers. Georgia has a comprehensive policy that permits AVs as long as they comply with federal motor vehicle safety standards, comply with state traffic laws, and can achieve a minimal risk condition, which is the stopped, low-risk operating condition of an AV in the event of system failure. West Virginia has even stricter AV legislation, requiring the submission of a law enforcement interaction plan to the WV Department of Transportation prior to operating an AV.

AVs are being tested in New Jersey. NJ TRANSIT is piloting its own LSAV, made to address first-mile, last-mile transportation, and the Port Authority piloted a driverless shuttle in 2023. Moreover, the DataCity Smart Mobility Testing Ground (SMTG), a partnership with Middlesex County, the NJDOT, the City of New Brunswick, Rutgers Center for Advanced Infrastructure and Transportation, and other private companies, is a step towards the implementation of AV technologies in New Jersey. The SMTG is a 2.4-mile corridor between Route 27 and Route 18 that is equipped with Self-Driving Grade roadside sensors and computing devices to enable smart mobility services to all travelers without the need for on-board units. The SMTG allows transportation agencies and AV companies to collaborate through data sharing, testing, and evaluation. However, no plans have been made to more widely introduce AVs on the roads, but the pilot projects are promising. Without a complete AV policy, the future of this technology in New Jersey is uncertain. The state should ensure that any AV legislation prioritizes vehicle and road safety, the protection of vulnerable road users, and equitable access. While proactive regulation of autonomous vehicles is vital, it is equally important to remain prepared to respond to unforeseen negative externalities that may arise as technology evolves. Related negative externalities include the potential for congestion, increased vehicle miles travelled, job displacement, collision liability and strain on transit infrastructure.

Waymo is currently operating manually in parts of Jersey City, along with Manhattan and Downtown Brooklyn, as part of its expansion into New York City. While they are not yet offering a ride-hailing service in these areas, they are mapping the locations and testing their autonomous technology with specialists behind the wheel, in anticipation of potentially offering fully autonomous rides in the future.

Additionally, the onset of robot delivery drivers poses questions surrounding the safety of their interactions with pedestrians and other road users. Autonomous delivery robots, or "robot delivery drivers," are self-driving machines designed to transport goods, often food or packages, to customers, typically using pedestrian paths. These robots utilize AI, GPS, and various sensors to navigate sidewalks and cross streets. Research suggests that the majority of conflicts between robot delivery vehicles and pedestrians occur clustered around the intersections of sidewalks and other non-motorized pathways. Furthermore, conflicts tended to arise when the robot delivery device got in front of or was attempting to pass pedestrians, including people with disabilities like sight impairment. As robot delivery devices increase in popularity, steps will need to be taken to ensure that conflicts between the robot delivery devices and pedestrians and other road users remains at a minimum.

Government Vehicle Fleet Size and Equipment

Action Item	Government Vehicle Fleet Size and Equipment
Key Objective	Safer Vehicles
Other Objectives	Safer People
Lead Agency	Dept. of Transportation
Support Agencies	All other agencies
Other Partners	
Action Type	Policy
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Mandate government fleet rightsizing to reduce the number of unnecessary vehicles and encourage smaller vehicles with features that better protect vulnerable road users.
- Require the installation of Lateral Protection Devices on applicable vehicles operated by government fleets and those contracted by state or local agencies.
- Mandate front-end designs that promote pedestrian safety on applicable vehicles operated by government fleets and those contracted by state or local agencies.
- Ensure government fleets and those contracted by state or local agencies are equipped with crash reduction equipment (automated braking technology, blind spot detection, advanced camera systems, Lateral Protection Devices/side guards, cameras, etc.)

Notes

Although they protect the driver, larger, heavier vehicles kill more pedestrians and cyclists, especially children. In fact, one study suggests that a vehicle that is hit by another vehicle that is 1,000 pounds heavier than itself results in a 40-50% increase in fatality risk. Therefore, it is likely that reducing fleet average weight and/or size will reduce fatalities and injuries. Because of their visibility and road presence, NJ agency fleets offer an opportunity to lead the way in reducing vehicle size.

Vehicle size and weight are increasing over time in all countries, especially the USA. This matters because larger cars are less fuel-efficient, more polluting, unsafe for pedestrians, and not designed for city streets. NJ agencies should invest in fleets that are optimized in number, smaller, and include more safety equipment. For example, the US Government Accountability Office (GAO) made recommendations in 2016 for eliminating unnecessary vehicles in government fleets. A 2022 report from GAO also found that in urban settings, sedans performed just as well as non-sedan vehicles, supporting the use of sedans and smaller vehicles in government fleets. Hawaii adheres to GAO's recommendations, requiring that fleet vehicles should not be larger than necessary for their function. New Jersey can build upon this to set similar standards, creating mechanisms for rightsizing fleets and prohibiting the purchase of vehicles that are larger than necessary. In Virginia, agencies looking to purchase vehicles larger than the smallest, most fuel-efficient vehicle must go through additional justification documentation.

Besides weight, front-end height and shape are significant factors where New Jersey fleet regulation could be effective. SUVs with a hood height over 40 inches are 45% more likely to cause pedestrian fatalities, and vehicles with a hood height between 30 and 40 inches and a blunt end also increase pedestrian fatalities. New Jersey fleet vehicles can be made safer by mandating a lower front-end and angled grille.

Government fleets at the municipal, county, and state levels often include large trucks and SUVs, which are disproportionately represented in fatal crashes involving pedestrians, bicyclists, and other vulnerable road users. To address this risk, procurement standards should be updated to prioritize vehicles equipped with exterior safety technologies that protect vulnerable road users. These features should include truck wheel side guards (lateral protection devices), crash avoidance systems such as automatic emergency braking and forward collision warning, blind spot detection, white-noise backup alarms, a minimum direct vision standard to improve driver sightlines, advanced camera systems, and speed management technologies designed to reduce the severity of collisions.

New York City is setting the national standard for fleet safety through its robust Safe Fleet Transition Plan, which highlights best-practice equipment already in use and outlines forward-looking proposals to prevent and mitigate vehicle-related crashes. Among its successes is the implementation of Intelligent Speed Assistance (ISA) technology, which led to a 64% reduction in speeding incidents during its pilot phase. Similarly, the NYC Truck of the Future pilot program saw one fleet experience a 50% decrease in vulnerable road user alerts within just three months of deploying new alert technology. Expanded investments in truck surround cameras, automatic braking systems, backup sensors, and lane departure alerts reflect NYC's efforts to elevate safety standards. This integrated strategy continues to equip the city's fleet with a prioritized suite of vehicle-based safety technologies, driving meaningful progress toward safer streets.

Lateral Protection Devices (Sideguards) for Trucks

Action Item	Lateral Protection Devices (Sideguards) for Trucks
Key Objective	Safer Vehicles
Other Objectives	
Lead Oversight Agency	
Support Agencies	
Other Partners	
Action Type	Legislative
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Research other city/state Lateral Protection Devices (sideguards) legislation in the US to serve as a model.
- Draft legislation to implement a statewide Lateral Protection Devices policy in NJ.
- Require the installation of Lateral Protection Devices on applicable vehicles operated by government fleets and those contracted by state or local agencies.

Notes

Large motor vehicles and trucks on roadways pose an increased risk to pedestrians, bicyclists, motorcyclists, and other vulnerable road users. Lateral protective devices are vehicle-based safety devices designed to keep pedestrians, bicyclists, and motorcyclists from being run over by a large truck's rear wheels in a side-impact collision. Nationally, while large trucks comprise 4% of registered vehicles, large trucks were involved in approximately 8% of pedestrian fatalities and 11% of bicyclist fatalities in 2019.

To address this concern, research has examined the effectiveness of truck lateral protection devices (LPDs) and their ability to minimize the negative effect of a "side-impact collision" between the truck and a vulnerable road user. Lateral Protection Devices cover the gap between the truck and the road on each side of the truck, thus preventing a vulnerable road user from being brought under the vehicle and being run over by the rear wheels. Lateral Protection Devices can be used on large trucks, commercial motor vehicles, garbage trucks, concrete mixers, and sanitation vehicles.

Other countries have enacted legislation that requires the use of Lateral Protection Devices/side guards on trucks. Internationally, Japan required the devices on trucks beginning in 1979; China and member states of the European Union adopted requirements for Lateral Protection Devices in the 1980s, as did Brazil in the 2000s. Following the legislation in the United Kingdom, there was a 61% drop in cyclist and a 20% drop in pedestrian fatalities in side-impact collisions with trucks. In the United States, there is no national policy for Lateral Protection Devices; however, numerous cities and states have taken action in implementing requirements for the devices. In 2021, New York City passed rules requiring all large motor vehicles in the city fleet and city-contracted vehicles to have side-guards by January 1, 2023.

Requiring Lateral Protection Devices on vehicles operated by government fleets and those contracted by state or local agencies represents a strategic measure to protect vulnerable road users, such as pedestrians, bicyclists, and motorcyclists from severe injury in side-impact collisions. Establishing these devices as a standard feature in publicly operated and affiliated fleets enables a faster transition to safer vehicles, as large fleet operators align with evolving regulations and are incentivized to retrofit their entire fleet, not just newly acquired vehicles.

New Jersey's legislation mandating Lateral Protection Devices would equip large motor vehicles with critical safety equipment designed to reduce the severity of crashes involving vulnerable road users when such individuals come into contact with the sides of trucks.

Mode Shift into Safer Vehicles

Action Item	Mode Shift into Safer Vehicles
Key Objective	Safer Vehicles
Other Objectives	Safer People Better Funding Processes
Lead Oversight Agency	
Support Agencies	
Other Partners	
Action Type	Policy | Encouragement
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Promote mode shift away from high-risk motor vehicles by investing in safe and reliable alternatives, including protected bike lanes, secure micromobility parking, and frequent, accessible transit.
- Choose vehicles with safety features to protect vulnerable road users in all government fleet purchases.
- Incentivize the transition to lighter, lower-profile vehicles, including e-bikes and shared micromobility, that reduce crash forces and improve visibility of people outside the vehicle.
- Disincentivize the use of large SUVs and pickups through targeted fees, parking reforms, or insurance pricing aligned with safety risks.
- Integrate land use and parking reforms that support compact, walkable neighborhoods and reduce car dependency.
- Leverage Safe System principles by reducing the speed and mass of vehicles on the road, lowering the risk of serious and fatal injuries.
- Strengthen first/last-mile connections to transit to reduce car trips and make the safer mode the easier choice.
- Reduce vehicle miles traveled.

- Adopt a policy that allows state employees to “cash out” an employer-provided parking subsidy.
- Establish a private-sector “parking cash-out” system to facilitate policy participation, further encouraging adoption by making the cash-out option tax deductible.

Notes

According to data from the 2019-2023 5-Year Estimates American Community Survey, 63.7% of working Americans aged 16 years or older in New Jersey commute to work driving alone via personal motor vehicle, while 15% worked from home. This leaves only 21.3% of workers in New Jersey commuting to work via public transportation and other means of active transport. Encouraging a mode shift away from personal motor vehicles, particularly large and heavy models like SUVs and pickups, towards public transit, walking, biking, and smaller passenger vehicles is an important step in reaching the goals of Target Zero. Reducing vehicle miles traveled (VMT) has a direct correlation with fewer crashes. According to the VMT reduction research, a 10% reduction in VMT can lead to a 10% decrease in crash involvement, increasing road safety for motor vehicle drivers and other road users. Mode shift strategies that prioritize transit and active transportation also help reduce systemic risk exposure for all road users.

VMT alone is not the sole factor influencing the severity and frequency of crashes. Studies have determined that the type of motor vehicle affects the level of risk posed to vulnerable road users. Traffic safety organizations have used collision data to determine that pedestrians have a 44% higher chance of being killed when struck by an SUV compared to a smaller sedan. For children, that risk increases to 82%. Additional studies show that vehicle mass significantly affects crash outcomes; a 1,000-pound increase in a striking vehicle raises the fatality risk for the struck party by 40 to 50 percent. The rise in “autobesity”, a term used to describe the trend toward increasingly massive motor vehicles, undermines progress toward Target Zero goals.

Beyond crash severity, shifting to transit and active transportation modes helps reallocate street space more equitably and reduce kinetic energy risks overall. Public health and transportation studies consistently show that areas with higher transit ridership and more walkable infrastructure experience lower rates of fatal and serious injury crashes. Moreover, these shifts produce environmental and health co-benefits, supporting broader state goals around climate and community well-being.

Parking cash-out is a policy tool that allows employers and employees to see a direct financial benefit from choosing transit, carpool, and active transportation in place of commuting via personal motor vehicle. In many workplaces, employers subsidize the cost of employee parking by leasing them a parking spot in a third-party lot or garage. A parking cash-out policy allows employers to offer the equivalent monthly cost of that parking spot directly to the employee as a monthly stipend. Doing so results in no direct fiscal impact on the employer, while substantially increasing an employee's take-home pay. State policy could play an important role in promoting parking cash-out as a more business- and worker-friendly option. Primarily, the state may prioritize adoption by allowing the cash-out payments to be tax-deductible for employers, employees, or both.

Additional public policy tools such as vehicle fees, congestion pricing, parking reform, and incentives for safer, smaller vehicles can further encourage these shifts. For instance, Paris has implemented SUV parking surcharges to disincentivize oversized motor vehicles in dense neighborhoods. While the U.S. has yet to adopt similar measures widely, national safety experts, including NHTSA and IIHS, have called for updates to vehicle safety ratings that account for risks to pedestrians and cyclists, not just occupants. Investments in transit service frequency, secure bike parking, e-bike incentives, and first-/last-mile connectivity can support a safer, multimodal system by making non-driving options more viable and attractive.

Collectively, these strategies align with the Safe System principle of minimizing the volume and impact of dangerous drivers on roadways. By shrinking the number and size of motor vehicles, New Jersey can reduce the likelihood and severity of crashes, especially those involving vulnerable road users, and move closer to its Target Zero safety goals.

Non-Compliant Motor Vehicles

Action Item	Non-Compliant Motor Vehicles
Key Objective	Safer Vehicles
Other Objectives	Safer Roads
Lead Oversight Agency	
Support Agencies	
Other Partners	
Action Type	Policy | Enforcement
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Implement a warning system during vehicle traffic stops for police to identify and issue a warning to drivers on vehicle non-compliance
- Authorize the New Jersey Motor Vehicle Commission (NJMVC) and other authorized inspection businesses to fail vehicles during inspection that have non-compliant aftermarket tints, license plate covers, mirrors, headlights or vehicle heights
- Create and distribute resources that educate car owners about the potential risks of dark window tints, especially with regard to driving at night and pedestrian visibility.
- Incorporate mirror safety education into drivers license training and testing materials
- Make educational resources on motor vehicle compliance available at MVC stations, vehicle repair shops, and driving schools throughout NJ
- Amend New Jersey laws to include specific limits for permitted visible light transmitted (VLT) or tint levels in rear passenger seat windows and rear windscreen.
- Conduct local studies on the effects of LED headlights and create context-specific performance standards based on the findings.

Notes

Addressing vehicle non-compliance issues is an important step in achieving Target Zero goals and maintaining overall road safety. Motor vehicle non-compliance such as window tinting, over-bright headlights, and broken mirrors can impair visibility, hinder the ability for law enforcement to view drivers or identify vehicles, and increase the risk of road crashes. Enforcing the compliance of these violations protects drivers, pedestrians, cyclists and other road users.

<u>Window Tint</u>

New Jersey Administrative Code 13:20-1.2 states that the visible light transmitted through the front windscreen must be a minimum of 70%, and 60% for the front seat driver and passenger windows. Unless given medical clearance, no tint is permitted to be installed on the front windscreen or front passenger windows by the motor vehicle owner. There is no code pertaining to the permitted tint or visible light transmission of rear seat windows, nor the rear windscreen.

Tinted motor vehicle windows pose significant safety risks to pedestrians and other road users. Excessively tinted windows reduce the visibility into and out of a motor vehicle, making it more difficult for drivers to see pedestrians, especially in low-light conditions such as at dawn, dusk, or in inclement weather. They also prevent pedestrians, cyclists, and other drivers from making eye contact with the motor vehicle operator, a vital form of non-verbal communication that helps predict driver intent. In the past, the NJMVC had the power to fail motor vehicles due to window tints during their inspection; however, this is no longer the case due to a shift in priority to emissions-based inspection.

Philadelphia has recognized the risk that tinted windows pose on the city's roadways and to law enforcement officers. In addition to traffic safety concerns related to visual cues and communication, they have found that individuals install window tints to conceal their identification while driving dangerously and illegally on roads, putting all road users in danger. To increase the enforcement of window tint violations, an ordinance signed in July 2024 permits the Philadelphia Parking Authority to issue a fine up to $100 for parked vehicles with window tints exceeding the legal limit.

Updating New Jersey's laws on tinted windows is long overdue. Empowering New Jersey motor vehicle inspection stations to fail motor vehicles for tinted windows, as they once did, would be an effective way to combat this issue. Increasing enforcement of window tint violations would also help increase statewide compliance of tint laws. These changes would improve driver-pedestrian visibility, facilitate safer interactions at intersections and crosswalks, and reduce the likelihood of crashes resulting from visual miscommunication or obscured sightlines. Ultimately, clearer visibility into and out of vehicles enhances road safety for all users. By tightening tinted window regulations and increasing enforcement, New Jersey would take a proactive step toward reducing preventable crashes and fatalities, especially in urban and pedestrian-heavy areas. This action aligns with the state's commitment to protecting its most vulnerable road users.

License Plate Covers

New Jersey law prohibits the use of any plastic, tinted, or glass covers over license plates, even if the plate remains partially visible. According to New Jersey Legislature Bill A3494, it is illegal to conceal or obscure any part of a license plate, including the numbers, letters, or the words "New Jersey." This also applies to any clear or reflective plastic shields that are designed to protect the plate, as this can reflect light in a way that makes the plate hard to read. Tinted covers and decorative frames that cover the state name or plate number are also strictly prohibited. This law applies to all license plates provided by the NJMVC. In New Jersey, both a front and rear license plate are required.

License plate covers and tints can pose several risks on roadways. They can obstruct visibility making it difficult for law enforcement, toll cameras, and automated systems to read the plate. This is especially prevalent with plate covers designed to look smoked or tinted. Some individuals use license plate covers to purposely evade tolls or traffic cameras, which is classified as fraud. Recognizing this, Pennsylvania has introduced a bill to explicitly ban license plate flipping devices. License plate covers can prevent accurate and timely identification in the event of a roadway collision or violation, prolonging and complicating the crash response process.

In New Jersey, if a license plate is partially covered, yet enough of it remains visible that the plate can be reasonably identified, law enforcement does not have the grounds for a lawful traffic stop. There is often pushback when law enforcement officers enforce non-moving violations, which could reduce their willingness to enforce laws relating to plate covers. Additionally, non-resident drivers who drive through New Jersey are usually awarded touring privileges, where certain laws may not be enforced. For example, Pennsylvania requires only a rear license plate on passenger vehicles, which excuses the vehicle owners from penalization in New Jersey. It is necessary to consider ways to increase enforcement of laws such as this to increase driver accountability and reduce the occurrence of these violations.

Providing educational material and resources to drivers may encourage compliance with plate requirements. This law can be enforced through NJMVC motor vehicle inspections, during a traffic stop for an enforceable violation, or using license plate recognition technology to issue warnings and fines without the need for a traffic stop. Currently, this violation carries up to a $100 fine. Increasing the penalty and enforcement of plate covers may increase adherence to the law by drivers.

LED Headlight Brightness

The auto industry began manufacturing motor vehicles with LED headlights in 2005. Two sets of regulations manage LED lighting; the FMVSS 108 sets standards for color, brightness, and placement, and the SAE J595 sets performance standards for LED warning lights on emergency vehicles. The National Highway Traffic Safety Administration (NHTSA) has not yet set regulations regarding the light intensity, glare, or blue wavelength light of LED headlights, and many headlights continue to be non-compliant. Non-compliant LED lights, especially those that are excessively bright, can affect road safety. Issues include:

- **Blinding Other Drivers:** Aftermarket LED headlights that don't meet regulations can create intense glare, making it difficult for oncoming drivers to see. No aftermarket LED headlight has been approved by the NHTSA. It is generally up to State law to address aftermarket LED headlights. However, inspecting headlights for aftermarket LED bulbs is challenging.
- **Improper Beam Patterns:** Many LED conversion kits don't align properly with existing headlight housings, leading to scattered light that reduces visibility rather than improving it. Installing LEDs into halogen headlight housing causes a dangerous glare and is illegal.
- **Color Temperature:** Legal headlights must produce white or yellow light. Many LED bulbs produce a blue light that has a color temperature well above the street legal level. However, measuring color temperature on aftermarket LED headlights is challenging.
- **Insurance Complications:** If a crash occurs and a vehicle has non-compliant LED headlights, insurance companies may refuse to cover damages, citing that the vehicle was not road-legal.

New Jersey must set more specific and stringent regulations to address non-compliance and enhance enforcement. A collaboration of ten European mobility clubs via the Federation Internationale de l'Automobile published a list of recommendations for reducing the negative effects of LED headlights. These include designing adaptive high beam systems in such a way that all road users can be recognized and not dazzled; softening the transition from light to dark and reducing the contrasts in the immediate area of the luminaire; reducing the luminance of light sources; requiring headlamp cleaning systems and automatic headlamp levelling systems to reduce scattering; further studying the causes of glare and determining limit values for luminance based on findings; and targeting campaigns towards road users to inform them of ways to minimize glare in road traffic.

New Jersey can better regulate non-compliant LED headlights beginning with aftermarket LEDs. Since these are more likely to be non-compliant, and are left to the state to address, the New Jersey legislature should work with the State Police to set stricter regulations on aftermarket LEDs while also developing strategies to enhance enforcement of non-compliance. California, for instance, has strong aftermarket LED laws, requiring that LEDs have a certain color temperature, that they are positioned to prevent blinding other road users, and that they must be marked with "DOT" to indicate their compliance with federal regulations. New Jersey can conduct more studies on LED headlights and produce more localized, context-specific standards based on these studies.

Broken or Missing Mirrors

New Jersey State Legislation 39:3-71 requires any registered motor vehicle manufactured after January 1, 1965, to be equipped with an interior rear-view mirror, and an exterior mirror on the driver's side. If the view of one of these is blocked, an additional mirror on the right passenger side is necessary so that the driver can utilize two mirrors at all times. Mirrors enable drivers to monitor their blind spots without turning their heads, reducing the time in which their eyes are off the road. Using a mirror enhances a driver's situational awareness of the areas beside and behind the motor vehicle. This improves a driver's ability to safely merge, view their blind spots, and spot vulnerable road users such as pedestrians and cyclists.

One key advantage of mirrors is that they are always functional as long as they are intact. However, this benefit is lost when a mirror becomes broken or is missing, and is not promptly replaced by the motor vehicle owner, posing a safety risk. While NJ Administrative Code 13:20-33.24 states that commercial motor vehicles must have securely mounted mirrors, they may still be certified at inspection if they have peeled, cracked, or broken mirrors that provide adequate view. If this is the case, the certifier must provide a verbal warning of the need to fix the mirror.

A lack of clear guidelines and consistent enforcement in New Jersey may contribute to a culture in which drivers delay or avoid repairing and replacing broken or missing mirrors. Increased enforcement on roadways, along with more stringent checks during motor vehicle inspections, can help improve mirror compliance. Additionally, raising awareness for this often overlooked issue, such as providing educational information to new drivers or during the driver's license testing process, can reinforce the importance of maintaining functional mirrors. Overall, improving mirror compliance can enhance roadway safety for all road users and has the potential to reduce crash rates and fatalities.

After Market Chassis Raising

NJ Administrative Code 13:20-37.1-11 permits the elevation of motor vehicle's chassis height provided that it meets a set of requirements. These requirements involve elements such as headlight height, license plate height, bumper height and tire size. Compliance with these requirements must be verified through an inspection. Only once compliance has been met can the NJ MVC issue an elevated motor vehicle approval certificate along with a window decal signaling lawful motor vehicle modification. Any violations of these regulations can result in the temporary suspension of the motor vehicles' registration and a fine of no more than $25.

While the code is detailed in the technical aspects of motor vehicle elevation, it fails to address the broader safety implications that these modifications can impose on other road users. Raising a motor vehicle's chassis can significantly alter the headlight positioning and height, causing glare or reducing visibility for the driver ahead or approaching. It can also restrict the sightlines of nearby vehicles, especially smaller ones, which may have an obstructed view of the road when next to or behind it. An elevated chassis can also lead to obstructed blind spots that diminish a driver's ability to detect vulnerable road users, putting pedestrians and cyclists at risk. In the event of a crash with a pedestrian or cyclist, the raised vehicle will strike the victim higher on their torso and inflict greater harm than a shorter vehicle would.

Motor vehicle non-compliance can increase the risk of vehicle crashes or near-misses, particularly on shared roadways or in high traffic areas. It is important to consider thoughtful regulation that prioritizes road safety for all road users, while increasing the enforcement of non-compliance during traffic stops and while performing motor vehicle inspections.

Prioritizing Safer Vehicle Design to Protect People

Action Item	Prioritizing Safe Vehicle Design to Protect People
Key Objective	Safer Vehicles
Other Objectives	Safer Roads
Lead Agency	
Support Agencies	
Other Partners	
Action Type	Policy Encouragement
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Collaborate with surrounding states and cities to collaborate on vehicle designs that prioritize vulnerable road users.
- Become part of the larger national conversation around mandating safer motor vehicle designs.
- Mandate safety features for better pedestrian protection in State fleets.
- Support emerging vehicle safety innovations through pilot programs and partnerships.

Notes

Vehicle design plays a critical role in the safety of vulnerable road users. Larger, heavier vehicles like SUVs and trucks are strongly [associated with a growth in pedestrian roadway fatalities](). According to the Insurance Institute for Highway Safety (IIHS), the average US passenger vehicle has gotten ten inches longer, eight inches taller, and 1,000 pounds heavier over the past three decades. While the proposed 2024 [Pedestrian Protection Act]() would have required the National Highway Traffic Safety Administration (NHTSA) to develop vehicle design safety standards to protect vulnerable road users including regulations on hood height and visibility, the bill was never passed. As a result, there is still an opportunity for states and cities to lead in strengthening regulations around vehicle design.

The European Union is a leader in pedestrian safety and the regulation of vehicle design that prioritizes vulnerable road users. In 2010, the EU introduced auto safety standards to reduce pedestrian fatalities and improve survivability. These standards include higher hoods (in combination with energy-absorbing materials and empty space under the vehicle) and external airbags, in some cases. External airbags function similarly to those found inside a motor vehicle but are larger and located on the sides and/or front of a motor vehicle. They deploy when sensors detect an incoming impact and are primarily designed to serve as a safety cushion for bicyclists or pedestrians, helping to reduce the risk of fatalities or severe injuries in the event of a crash. Such a technology has yet to be introduced in the U.S. market. The EU's standards require that vehicles are subjected to crash tests to evaluate front-end impacts with pedestrians. The United Nations released a set of recommendations for safer vehicle design in 2009 that largely guided the EU regulations and could serve as a foundation for safer design in the US.

New York City's Vision Zero Fleet Safety Forum demonstrates how local and state-level action can advance safer vehicle practices, even in the absence of a federal framework. The Fleet Safety Forum brings together private fleets, equipment suppliers, federal, state, and city agencies, nonprofits, and universities to promote vehicle safety and educate fleet managers about Vision Zero. New Jersey could establish a similar initiative, collaborating with local stakeholders and even neighbouring states and cities to share best practices and drive progress in safe vehicle design. The State can also lead by example, prioritizing pedestrian safety in public fleet procurement to encourage broader industry change. By incorporating pedestrian safety standards such as front-end visibility, crash test performance, or aftermarket safety add-ons, into procurement contracts, New Jersey can influence manufacturer priorities and normalize safer designs.

New York City’s Safe Fleet Transition Plan, which pilots and scales emerging safety technologies in city-owned vehicles, can serve as a model for supporting innovations in New Jersey. The Safe Fleet Transition Plan has piloted blind spot detection, intelligent speed assistance (ISA), backup cameras, pedestrian alert systems, and high-vision truck cabs, and has led to the wide deployment of ISA in light-duty fleet vehicles. A similar approach could help New Jersey evaluate and gradually adopt emerging vehicle technologies that prioritize vulnerable road user safety.

Statewide Dash Cam Policy

Action Item	Statewide Dash Cam Policy
Key Objective	Safer Vehicles
Other Objectives	Safer People Post-Crash Care
Lead Oversight Agency	Div. of Highway Traffic Safety
Support Agencies	
Other Partners	
Action Type	Policy | Legislative
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Mandate the installation and operation of dash cams in all state motor vehicle fleets while in use.
- Incentivize dash cams in all motor vehicles by implementing a dash cam rebate or subsidy program.
- Offer all drivers who adopt consistent dash cam use a tax deduction on auto insurance premiums.
- Create an educational manual to direct motor vehicle owners on dash cam best practices and effective use.

Notes

A dash cam, short for dash camera, is a small device mounted on a motor vehicles dashboard or windshield of a car that continuously records footage when a motor vehicle is on. Most often, they are plugged in and powered by the car's battery, and therefore automatically turn on with the car. It can be a valuable tool for all road users, and may prove useful when least expected. At any time, drivers can download and share footage with police, emergency services, and/or insurance providers to help determine who may be at fault in a collision, understand a mechanism of injury, and review driver behavior.

There are many different types of dashcams that provide various levels of technology. They also vary in quality and price. Some cameras have newer technology that connects to a mobile phone or cloud for storage playback, or come with sensors that track driver distraction, speed and location. Other dash cams have an integrated screen to double as a reversing camera. Some cameras have better quality than others or have night vision so it is best to be informed of all options to buy a dash cam suited to a motor vehicle owner's needs.
Camera types include:

- **Single Lens:** This is generally the most basic, has a front facing lens to record the drivers view of the road, is affordable, and easy to install
- **Dual Lens:** This could be a single camera that records both the front windshield and interior cabin, OR two separate cameras with one lens recording out of the front and the other out of the back window. These may be slightly more expensive, but can provide valuable video evidence for a driver.
- **Triple Lens:** This captures continuous video out of the front windshield, interior cabin, and back window. These cameras tend to be more expensive and have a complicated set up. They are generally more popular among ride share drivers to protect themselves and passengers.
- **Other:** Additional dash cam options include 360º dashcams that use fish eye lenses to record everything, however these lenses are expensive and distort the image. Other cameras protect parked motor vehicles by reserving battery, and turning on when motion is sensed.

While the use of dash cams are beneficial for all drivers in terms of insurance and safety reasons, they are especially useful in state-owned motor vehicle fleets. According to New Jersey Legislature Bill A3914, state-owned motor vehicles are assigned to and used by employees of the state for conducting business related to the state and their job. The requirement of dash cams in state owned motor vehicle fleets would enforce accountability of government workers to accurately conduct and report their business, while protecting them from false claims. While officers wear body worn cameras, the addition of mandated dash cams in police cars and other state motor vehicle fleets promotes consistency across divisions.

Additionally, these cameras can monitor the behavior of drivers. The knowledge that an individual is being recorded may encourage them to follow protocols and practice safe driving behaviors. In the short term, these actions can improve road safety and reduce road crashes, and lower maintenance costs in the long term. By downloading and reviewing the footage, feedback can be provided to drivers. Training material can be created for better driving practices, how incidents may have been avoided or handled differently, and how emergency response preparation could be improved. Incentives like rebates, subsidies, and tax deductions can be leveraged to encourage the adoption of dash cams among all drivers.

Installing dash cams offers a range of short- and long-term benefits. Recorded footage provides objective, hard-to-dispute evidence, which strengthens the validity of traffic crash claims, and streamlines insurance processes. By educating all motor vehicle owners on the advantages of dash cams—and offering incentives and subsidies to reduce costs—New Jersey can encourage the broader adoption of this technology. For state motor vehicle fleets, mandated dashcams offer ongoing value. They protect government employees while ensuring they comply with driving protocols and safe driving behaviors. By increasing transparency and accountability in government operations, public perception and trust may be enhanced.

Utility Task Vehicle (UTV) Ban on Public Roadways

Action Item	Utility Task Vehicle (UTV) Ban on Public Roadways
Key Objective	Safer Vehicles
Other Objectives	
Lead Agency	
Support Agencies	
Other Partners	
Action Type	Legislative
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Update the New Jersey Motor Vehicle and Traffic Regulation law to explicitly ban the use of utility task vehicles (UTVs) on any public roadways.
- Ensure loopholes, including touring UTVs registered in other states that allow riding on public roads, are not possible.
- Create a plan for enforcement of this legislation.

Notes

The operation of utility task vehicles (UTVs) on public roadways poses significant safety risks due to their design, which is not suited for on-road use. Utility Task Vehicles feature side-by-side seating, a steering wheel, and foot pedals. UTVs often lack essential safety features required for highway operation, such as adequate lighting, mirrors, and braking systems. Their presence on public roads can lead to increased crashes and can endanger both the UTV operators and other road users. All-terrain vehicles (ATVs) are similar to UTVs, and one study found that 60% of ATV-related fatalities involved roadway crashes. Even if a jurisdiction allows UTVs on public roads, the Consumer Product Safety Commission strongly advises against using them on paved roads.

In New Jersey, if you own an ATV, dirt bike, dune buggy, or snowmobile, you need to register it with the NJ Motor Vehicle Commission (MVC) and insure it for off-road use. New Jersey prohibits the use of off-road vehicles on public roads and lands, but does not specifically reference UTVs. Properly registered off-road vehicles are permitted to cross public streets and highways, and can ride adjacent to a highway when attempting to gain access to an appropriate area. Law enforcement have the right to impound off-road vehicles or issue fines for violations. Despite this threat of enforcement, a loophole is presently being exploited that is impeding law enforcement from taking action. Residents are registering their UTVs as street-legal in Montana using an online service and then driving them on New Jersey roads, claiming touring privileges.

New Jersey needs a law that bans the use of UTVs on any roadways, regardless of their registration type or status. By explicitly prohibiting UTVs on public roadways, this legislation will enhance traffic safety and reduce the potential for crashes involving these vehicles. Alabama is a successful example of express prohibition of off-road vehicles on any public road. Alabama clarifies that off-road vehicle are not manufactured for roads and cannot be registered as street legal. Alabama's law is strict enough to withstand loopholes. New Jersey should model a new law after Alabama's.

Vehicle Safety Inspection Program

Action Item	Vehicle Safety Inspection Program
Key Objective	Safer Vehicles
Other Objectives	
Lead Oversight Agency	NJMVC
Support Agencies	
Other Partners	
Action Type	Enforcement
Timeframe	
Priority	
Cost	
Performance Metric/Evaluation Method	

Description

- Develop a separate safety vehicle inspection program/checklist that focuses solely on ensuring that motor vehicles in NJ have safety features designed to improve safety of vulnerable road users.
- Reduce the number of vehicles exempt from inspections, as these vehicles can still pose a risk to vulnerable road users.
- Expand the NJMVC Mobile Inspection Unit program and/or the State Police's Commercial Carrier Safety Inspection Unit to include safety inspections for passenger vehicles.
- Expand inspections to include vehicle operating safety elements including brakes, steering, suspension, and tires. Explore adding inspection of other safety elements, including seatbelts, glazing and window tinting, headlight aim, license plate covers, mirrors, and break, turn, and marker lights.

Notes

Vehicle inspections ensure that the motor vehicles on the road meet the necessary safety or emissions standards. As of August 1, 2010, passenger vehicles in New Jersey only need to complete a biennial emissions inspection, with new vehicles subject to an emissions inspection every five years. Safety inspections for passenger vehicles are no longer mandated, although annual safety inspections for commercial vehicles are required.

Moreover, the New Jersey Motor Vehicle Commission (NJMVC) has a large list of motor vehicles that are exempt from an inspection. Some of these vehicles include motorcycles, "historic vehicles", and 100% electric vehicles. The state cited the safety features of modern vehicles, as well as the ability for law enforcement to address safety issues, in the decision to end safety inspections for passenger vehicles. This means that enforcement of safety is often reactive, and only occurs when safety issues become visible. Due to the high cost of purchasing new vehicles, the average age of passenger cars in operation on US roadways in 2024 was 14 years old. New Jersey should reestablish a passenger vehicle safety inspection program to ensure that maintenance and safety issues are detected early to protect vulnerable road users.

Several states continue to require periodic safety inspections for passenger vehicles. In an effort to ensure that every vehicle meets the minimum standards for safe operation in the state, New York mandates annual safety inspections for all vehicles, including passenger vehicles. The inspection program examines seat belts, brakes, front-end assembly, tires, lights, windshield and windshield wipers, horn, mirrors, and looks for fuel leaks. Pennsylvania also has an annual safety inspection program for most passenger vehicles. School vehicles and mass transit buses are required to pass safety inspections every six months. Pennsylvania's safety inspection program examines suspension, steering, brakes, tires, lighting and electrical systems, glazing, mirrors, windshields, fuel systems, speedometers, odometers, exhaust systems, horns, and the vehicle body.

New Jersey can develop a new motor vehicle inspection program/checklist that has strict guidelines to promote safety not only for individuals inside a motor vehicle, but also for vulnerable road users. The new program could require safety inspection every two years, as is the case for emissions inspections. Safety inspections can include ensuring mirrors are in place and are not broken, headlights are not so bright that they blind a pedestrian or cyclist, and a window tint does not inhibit the driver's ability to identify a vulnerable road user. This inspection should also ensure that the vehicles tires, brakes, and other systems are in working condition to ensure a vehicle's ability to meet stopping distance or react safely in harsh weather conditions. Furthermore, the list of exempt vehicles should be reviewed and shortened. Many vehicles on this list can pose a risk to vulnerable road users. By having this new program/checklist solely focus on these safety features, vehicles on New Jersey's roads will be safer for all road users.