

Amazon Scout Testimony MD .pdf

Uploaded by: Cleland, Jeff

Position: FAV

Amazon Scout Testimony

Thank you Delegate Fraser-Hidalgo and members of the committee for the opportunity to participate in today's hearing. My name is Jeff Cleland and I lead state and local transportation policy at Amazon. I am excited to join you today in support of Amazon Scout, our personal delivery device.

Amazon is proud of its growth in the state of Maryland. In fact, we have invested over \$5 billion in our people and operations this past year, growing to over 29,000 full- and part-time employees at our fulfillment and sortation centers, delivery stations, Whole Foods Markets, a regional Air Hub, and an Amazon Book Store. That is why we are excited to support (H B 0595), which creates a personal delivery device statute allowing devices like Amazon Scout to operate in Maryland.

In January 2019, Amazon launched Scout, a fully electric, autonomous delivery system that operates in pedestrian areas like sidewalks and crosswalks. Our device is the size of a small cooler that you would bring to a beach, and operates at about the same speed as the average person walks. Scout is 100% electric and is helping Amazon drive towards our goal of making all Amazon shipments net zero carbon, with 50% of all shipments net zero carbon by 2030.

Safety is Amazon's top priority, and Scout was designed for safe operations. Scout is readily visible to others and is able to stop, or safely navigate around pedestrians, pets, and other obstacles.

Scout is currently operating in select neighborhoods in four communities: Snohomish County, Washington; Irvine, California; Atlanta, Georgia; and Franklin, Tennessee. Customers, neighbors, and even local pets are at first curious about Scout, but, we have seen that the device quickly becomes a normal, welcome part of the neighborhood.

We are starting in suburban areas but hope to expand to additional communities in the future. Suburban sidewalks are some of the least utilized infrastructure in certain regions, and this is a safe, innovative, and environmentally friendly last-mile delivery option.

We are excited that other states are considering similar legislation. To date, more than 15 states and the District of Columbia have passed personal delivery device legislation, with North Carolina being the most recent.

Thank you for the opportunity to share more information and please let me know if you have any questions on Amazon Scout.

HB595 Sponsor Testimony.pdf

Uploaded by: Fraser-Hidalgo, David

Position: FAV

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Environment and Transportation Committee

Chair
Motor Vehicle and Transportation
Subcommittee



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THE MARYLAND HOUSE OF DELEGATES
ANNAPOLIS, MARYLAND 21401

Sponsor Testimony in Support of HB595
Vehicle Laws – Personal Delivery Devices – Standards and Requirements
Testimony by Delegate David Fraser-Hidalgo
February 11, 2021- The Environment and Transportation Committee

E-commerce has expanded rapidly over the last decade; with this expansion we are seeing an emergence of new technology that offers innovative delivery solutions. HB595 introduces definitions for Personal Delivery Devices (PDDs), a cutting edge electric device that will give consumers another delivery option while reducing the carbon footprint of the delivery.

This bill will allow PDDs to operate in the state, making Maryland the 13th state to do so (Arizona, Florida, Idaho, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin). PDDs are environmentally friendly and can ease traffic congestion as delivery vehicles are taken off the road and replaced by electric delivery systems.

Facts about PDDS in HB595:

- Operated primarily on sidewalks and crosswalks
- Intended primarily for the transport of property on public rights of way
- Weighs no more than 200 pounds, excluding cargo
- Capable of navigating with or without active control or monitoring
- May not interfere with traffic, block public rights of way, or transport hazardous materials that could pose an unreasonable risk
- May not exceed a speed of 3.5 miles per hour
- Must be visibly marked with an identifying number and contact information
- Any information must also be marked in Braille lettering
- Must be able to come to a controlled stop

- Must carry a general liability insurance policy
- Must be equipped with lighting devices

HB595 is a bill that will lay the groundwork for PDDs in Maryland. I ask you for a favorable report for HB595 to pave the way for a mechanism to provide fast and accurate delivery services while considering Maryland's environment.

HB595 Scott Pauchnik FedEx.pdf

Uploaded by: Pauchnik, Scott

Position: FWA

**Testimony of
Scott M. Pauchnik
Sr. State and Local Government Affairs Representative
FedEx Corporation
On HB 595, Personal Delivery Devices
Before the
Maryland House Environment and Transportation Committee
February 11, 2021**

Good afternoon, Chairman Barve, Vice Chair Stein and members of the committee, my name is Scott Pauchnik and I am the Sr. State and Local Government Affairs Representative for FedEx Corporation in the Mid-Atlantic region. FedEx Operating Companies have more than 60 facilities and employ nearly 6000 residents in the state of Maryland. Some of the largest and most state of the art facilities in the FedEx network are located in Hagerstown, Baltimore, Gaithersburg and many other areas across the state.

I am here today to support HB 595 with amendments. FedEx is grateful to Delegate Fraser-Hidalgo for sponsoring this legislation and to the committee for giving us an opportunity to showcase this new and emerging technology.

The legislation before you will pave the way for the next generation of autonomous Personal Delivery Devices (PDDs); demanded by the customer and created to serve businesses and consumers in Maryland safely and efficiently while delivering same day, last mile goods.

The rapid expansion of eCommerce over the last several years has fueled the growth of many industries. The benefits offered by online shopping, such as convenience, more choices, and lower prices, have become more appealing to consumers with the addition of fast delivery.

However, this creates some unique hurdles for our industry and society as a whole. Traffic congestion and pollution are obvious ones. A growing shortage of drivers willing and qualified to spend hours behind the wheel every day dealing with such conditions is another. The so-called 'last-mile' delivery from stores and warehouses to the doors of businesses and consumers is the most complex and costly task in the supply chain, particularly in the diverse urban and suburban environment of vehicles, bicycles, pedestrians, and a growing variety of personal mobility devices.

These challenges have been exacerbated by the COVID-19 pandemic. Now more than ever PDDs are a viable option to deliver goods in a way that reduces human contact all the while offering a new fast and efficient service. The global pandemic has propelled technologies like PDDs to the forefront of the supply chain giving businesses like FedEx the ability to provide last mile delivery in a safe, time-sensitive way.

At FedEx, we recognize that our impact is greater than the services we provide. We are committed to being a great place to work, a thoughtful steward of the environment and a caring citizen in the communities where we live and work. We are passionate about sustainably connecting people and places and improving the quality of life around the world. With this

mission in mind, we have created the FedEx SameDay Bot, Roxo™, a safe and friendly autonomous Personal Delivery Device designed to address some of the above challenges.

FedEx is working alongside major national retailers to determine the needs of different customers with many types of products to deliver. For example, health care workers can transport needed personal protection equipment (PPE) to fellow health care workers within a hospital campus without diverting them away from their job duties – taking care of patients. Auto parts stores often have nearby auto repair shops as their top customers. For them, this technology is an opportunity to quickly deliver needed parts to these auto repair shops, again, without diverting employees from their primary work. Further, a restaurant is looking at the bot as an option for deliveries, such as hot pizza from its restaurants. General merchandise stores are exploring opportunities to deliver items from its stores to customers nearby the same day. And a home improvement store is considering ways to dispatch material to a nearby contractor in need of supplies quickly. These are just a few of many ways Roxo's capabilities can be utilized in the everyday demand and movement of goods.

Safety and sustainability are the overarching considerations of Roxo's design. It is built on the iBot wheelchair base engineered by DEKA Research and Development Corporation, with over 10 million hours of error-free operation. Here are some of Roxo's key features:

- Roxo is a zero-emission, battery-powered Personal Delivery Device.
- Roxo is capable of traveling at variable speeds within approved speed limits.
- Roxo possesses a sophisticated set of pedestrian safe technologies from the iBot base, plus a network of sensors and cameras that provide 360-degree vision for complete awareness of its surroundings.
- It also utilizes advanced 'machine learning' algorithms to detect and avoid obstacles, plot a safe path, and follow all applicable road and safety rules.
- Roxo features have been developed specifically to communicate with those it encounters on the street. e.g. turn signals, lights and a signaling screen to clearly signal its intentions to pedestrians, cyclists and vehicles around it.
- Roxo is designed with a taller profile for pedestrian and driver visibility.
- Proprietary technology makes the Roxo highly stable, allowing it to negotiate curbs, unpaved surfaces, and even steps for a door-to-door delivery experience.
- Roxo is remotely monitored at all times. When the Bot doesn't know what to do, it stops, calls for assistance and a teleoperator takes over.

PDDs like Roxo will complement and supplement our existing workforce while safeguarding the health, safety and welfare of all Marylanders. Roxo will allow us to serve a new market with our FedEx On Demand service, and it does not replace any of our current delivery services or solutions. This service will also create new jobs in remote operations monitoring, customer support and local maintenance.

As I mentioned, the surge in e-commerce during the pandemic has resulted in peak-like levels of package volume for FedEx. Since March 2020, to ensure customers continue to receive outstanding service throughout this challenging period, FedEx has hired tens of thousands of package handlers, contracted with thousands of service providers and has onboarded thousands

of drivers in targeted markets. With e-commerce and freight volumes expected to continue to grow in the coming years, and industry driver shortages estimated as high as 60,000 due to driver retirements and recruitment challenges, PDDs offer a sustainable solution to increase the efficiency of short-range, on-demand, business-to-consumer deliveries in urban areas and residential neighborhoods.

To date, the states of Arizona, Florida, Idaho, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin have enacted statutes allowing for the deployment and regulation of PDDs. Also, there are an additional 8 states considering PDD legislation during their 2021 sessions. It is our hope that Maryland continues its proven track record of welcoming the development and application of new technologies within the state by considering HB 595.

As I said earlier, FedEx supports HB 595 with amendments. We are asking this committee to consider increasing the allowable weight for a Personal Delivery Device and to increase the speed on sidewalks to 10mph. Roxo stands nearly 4 and half feet tall and is equipped to carry up to 100lbs of payload. Unlike some of the smaller sidewalk robots, Roxo's relatively tall profile makes it easily visible at eye level to pedestrians, bicyclists and motorists. Current weight restrictions prohibit Roxo from operating in the State of Maryland and speed restrictions hinder the safety and efficiency of Roxo. The weight restriction must be omitted for Roxo to operate in Maryland. Please consider amending HB 595 to include Roxo. Thank you for your time and attention.

HB0595 - MVA - Vehicle Laws - Personal Delivery De

Uploaded by: Westervelt, Patricia

Position: INFO

February 11, 2021

The Honorable Kumar P. Barve
Chairman, House Environment & Transportation Committee
251 House Office Building
Annapolis MD 21401

Re: Letter of Information – House Bill 595 – Vehicle Laws - Personal Delivery Devices - Standards and Requirements

Dear Chairman Barve and Committee Members:

The Maryland Department of Transportation (MDOT) takes no position on House Bill 595 but offers the following information for the Committee's consideration.

House Bill 595 establishes exceptions to motor vehicle registration requirements for personal delivery devices and authorizes personal delivery devices to operate on sidewalks, crosswalks, and highways. This bill establishes a standard whereby a personal delivery device may navigate with or without the active control or monitoring of an individual, may weigh up to 200 lbs. excluding cargo, and may travel up to 3.5 miles per hour on a sidewalk or crosswalk.

The MDOT Motor Vehicle Administration (MVA) monitors emerging and innovative technologies such as personal delivery devices (PDDs) to adapt to, and take advantage of, technologies reshaping mobility choices. PDDs have emerged as an innovative technology promising to improve the efficiency of deliveries. The impact on the transportation sector is currently not well-understood.

The Administration has identified several technical aspects to implementing the bill that remain unresolved: there are no identified roadway prohibitions, it is unclear how a unique identifying number would be assigned, there is no defined process for regulating the approval of devices, there are no standards for device hardware or software (including the lighting requirements), and the method for monitoring insurance compliance is unclear.

Several states now allow PDDs in public spaces (WA, AZ, FL, and others), although regulations are not uniform across these States. As this technology proliferates, several areas of uncertainty remain that all communities will have to consider. Chiefly, children, seniors, and people with disabilities navigating walkways will be impacted by these devices, the ability to adjust to crowded environments is currently inconsistent, and safeguards and safety controls for these devices are still evolving. Land use concerns such as the management of curb access will need to be considered if PDDs begin to appear in Maryland communities.

MDOT MVA currently has a process for connected and automated vehicles on Maryland's roadways. Since 2015, MDOT MVA has supported a robust Connected and Automated Vehicle (CAV) Working Group which serves as the central point of coordination for the development and deployment of emerging CAV technologies in Maryland. Maryland's CAV Working Group includes elected officials, representatives from state and local government, highway safety organizations, private sector, automotive industry and other transportation stakeholders. This group evaluates the latest research - including guidance from the American Association of Motor Vehicle Administrators (AAMVA) and the U.S. Department of Transportation - tracks federal and state actions, and coordinates with all interested stakeholders. This collaborative program is setting a course for the future of automated and connected vehicles in Maryland which prioritizes the safety for all roadway users.

MDOT MVA serves as the central clearinghouse for planning and coordination as well as testing for CAVs in Maryland. In order to support a safe and productive testing environment, MDOT MVA facilitates a permit process for parties interested in testing highly automated vehicles (HAV), and has designated a number of sites, owned by MDOT and its partners, for the testing of connected and automated vehicle technologies. Through the HAV permit process, applicants work collaboratively with MDOT MVA to ensure project objectives are met while prioritizing safety in testing.

MDOT MVA is embracing CAV technology and working collaboratively with many partners to ensure that Marylanders benefit from a transportation system which fully realizes the many positive potential outcomes of CAV technology, while also ensuring the safety of all roadway users.

The Maryland Department of Transportation respectfully requests that the Committee consider this information as it deliberates House Bill 595.

Respectfully submitted,

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