



Q2
2018

AUTONOMOUS VEHICLE TESTING **PROGRESS REPORT**

Quarterly update for the City of Boston on Optimus Ride's autonomous vehicle testing program.



Optimus Ride Inc. is a self-driving vehicle technology company. Emerging from Boston's vibrant robotics ecosystem, we carefully bring together the promise of self-driving technologies with real-world considerations. We design our software to enable efficient, sustainable, and equitable mobility systems and solutions.

Summary / Miles Driven

To date, we have driven over 1000 miles autonomously on Boston public roads within the Marine Park. That's more than the distance between Boston and Chicago!

Research Achievements

Without compromising safety, Optimus Ride is working towards increasing speeds within our low-speed vehicle platform. All roads in the Seaport are capped at 25 mph, unless otherwise marked, well within our operating speeds. As we work towards operating closer to 25 MPH, we can more seamlessly operate at the common speed within our area's road networks. Optimus Ride is committed to staying under 25 MPH when operating our vehicles as we believe that low-speed operation creates an environment that is safer for all road users, including pedestrians and cyclists.

This quarter, Optimus Ride also received approval to expand autonomous testing to Massport roads outside of the Raymond Flynn Marine Park and into the Innovation District. This means our vehicles now have access to nearby attractions such as Blue Hills Bank Pavillion and the World Trade Center. Many of our recent research achievements center around developing tests which enable our vehicle to safely operate on our expanded road network.

Earlier this year, Optimus Ride determined that the performance and safety of our vehicle was ready for passenger transport. We have spent our time during Q2 focusing on the robustness of our software within the Marine Park to further ensure the absolute safety and performance of our system, particularly as we prepare for passenger transport. With the appropriate approval to pursue that goal, we have focused our efforts on ramping up our operations team in the Seaport area to begin testing out our Boston operations. This means hiring more operations employees and training them on the proper operation of our vehicle in accordance with our training program. We've also created an avenue for these employees to gain more skills and grow within the company, into roles with more responsibilities and opportunities for growth. For our operations, we primarily look to hire people as locally as possible, from nearby neighborhoods such as South Boston and Roxbury. Building out our team allows us to bring on people with new perspectives who can give us a more holistic view on our product and service offerings.



Potential Improvements

Many of the roads located in the Marine Flynn Park are wider than most Boston city roads, with some single-lane roads measuring more than 15 feet wide, whereas lanes with high volumes of heavy vehicles typically measure 11-12 feet. One major side effect of roads with large widths is speeding. Research shows that traffic calming solutions - including narrower lanes, elevated tables, and radar speed displays - have a positive effect on these road conditions and can promote safe roads for all.

Additionally, with harsh winters and frequent construction, many of the lane markings have not been maintained. As a result, Optimus Ride has found that human drivers find it difficult to follow traffic rules as other drivers are constantly violating the rules. Additionally, the lane markings delineating bicycle paths are worn and invisible in many areas, creating confusing and potentially hazardous conditions for pedestrians, bikers, and drivers alike. A refresh of lane stripping and marked bus lanes would make certain roads, such as Northern Ave, safer and more predictable to maneuver. Recently, we have seen this done and it has greatly improved the overall road conditions.



(LEFT) Tide Street measures >20 ft in certain regions which leave room for unmarked truck parking.

(RIGHT) Northern Avenue measures up to 20 ft in some areas, allowing a single-lane road to be unofficially used as a multi-lane road with a bus lane at times.

Thank you

We are thankful to the State of Massachusetts and the City of Boston for supporting the development of the autonomous vehicle industry. As the only Boston-based startup in the autonomous vehicle technology industry, we are excited to grow our operations in the state and continue pursuing efficient, sustainable, and equitable mobility systems and solutions.

